```
Search Notes
                                                                                                                                                                                                              Result
                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   on:
                                                                                                                                                                                                                                              Pred. No. is the score greater is and is derived
                                                                            1230

235.8

98.4

98.6

90.6

91.8

90.4

90.4

90.4

90.4
                                                                                                                                                                                                                                                                                                                                                                                                                DB
Bd
                                                                                                                                                                                                      Score
                                     90
89.2
89.2
89.2
89.2
                                                                                                                                                                                                                                                                                                                                                                                                              seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1
                                                                                                                                                                                                                                         No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nucleic search, using sw model
                                                                                                                                                                                                                                                                              US-09-831-804-1
2060
1 ctttattaggaaga
                                                                                                                                                                             100.0
                                                                                                                                                                                                      Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                    3373863 seqs, 2124099041 residues
                                                                                                                                                                                                              Query
                                                                                                                                                                                                                                                                                                                                                       N_Geneseq_29Jan04:*
1: geneseqn1980s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                July 28,
    4.8
4.8
4.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ctttattaggaagattggct.....gacatattactctcttaatg 2060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyright
                                                                                                                                                                                                                                                                             geneseqn2003bs:*
geneseqn2003cs:*
geneseqn2004s:*
                                                                                                                                                                                                                                                                                                     geneseqn2001bs:*
geneseqn2002s:*
geneseqn2003as:*
                                                                                                                                                                                                                                                                                                                             geneseqn2001as:*
                                                                                                                                                                                                                                                                                                                                       geneseqn2000s:*
                                                                                                                                                                                                                                                                                                                                             geneseqn1990s:*
    2004,
                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12:44:51 ; Search time 820 Seconds (without alignments)
10672.302 Million cell updates/sec
   ADC30762
AAS68872
AAH16178
ABK83826
AAH16608
AAS66143
AAS92560
AAI57845
                                                                   AAD55863
ADA53124
ADA52931
ADC58104
                                                                                                   ADB63624
ADC56695
ADB62468
                                                                                                                                           AAA15398
ABZ32206
ADA53158
ACA98970
ACA56456
AAS91317
                                                                                                                            AAL51569
AAS64586
                                                                                                                                                                                                     Ħ
                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                      6747726
                                                                         Aad55863
Ada53124
Ada52931
                                  Aas68872
Aah16178
Abk83826
                                                         Adc58104
Adc30762
  Aas92560
Aai57845
                                                                                                  Adc56695
Adb62468
                                                                                                                                                                           Aaa15398
Abz32206
                   Aas66143
                           Aah16608
                                                                                                                   Adb63624
                                                                                                                            Aas64586
                                                                                                                                   Aa151569
                                                                                                                                           Aas91317
                                                                                                                                                   Aca56456
                                                                                                                                                          Aca98970
                                                                                                                                                                    Ada53158
                                                                                                                                                                                                    Description
Human cDN
Human cDN
Human cDN
DNA encod
DNA encod
Human pol
                         Human nuc
Human cod
Human cod
Zinc fing
Human nov
DNA encod
Human cDN
Human cDN
                                                                                                 Human nuc
DNA encod
Human cDN
Human mac
Human cDN
                                                                                                                                          Human sig
                                                                                                                                                          cDNA enco
                                                                                                                                                                  Human cod
                                                                                                                                                                           Candida
                                                                                                                                                                                   DNA encod
```

								O		C											
45	44	43	42	41	40	39	8	37	36	Ç	4	ا اما	32	1 (L)	30	29	00	27	26	25	24
84.8	85.6	łл	86	86	86	86.2	86.2	(T)	(T)	86.2	6	86.2	86.8	86.8	86.8	00	87.2	7.	.8	٠	8
4.1	4.2	4.2	4.2	4.2		4.2	4.2	4.2	4.2	4.2	٠	4.2			٠		4.2	٠			4.3
2239	2476	1549	3400	3309	1890	2681	2607	2558	2558	2558	2558	1377	6316	6219	2662	976	831	1757	2509	4227	2597
7	7	Ŋ	φ	7	9	7	υı	7	7	4	4	7	7	7	Φ	տ	9	9	δ	œ	7
ADA53516	ACC46407	AAS67562	ADB62883	ACC46347	ADC30336	ABX34772	AAS87125	ABX74040	ABX74039	AAS26691	AAS26690	ABX34443	ACC46373	ACC46324	ABQ93353	AAS69188	ABQ55095	ABQ81135	AAD31103	ACA98938	AAD55855
Human		DNA er			Human		DNA e		Human	Human	Aas26690 Human gen			Human	Abq93353 Human cDN	Aas69188 DNA encod	Abq55095 Human ova	TRAF6	Aad31103 Human tra	Aca98938 cDNA enco	Aad55855 Human nuc

ALIGNMENTS

```
AAA15398
ID AAA1
                                                                                                                                                                                                                                                                                                                  RESULT 1
                                                                                 WPI; 2000-376549/32.
                                                                                                                                      09-NOV-1999;
                                                                                                                                                                                                      CDS
                                                                          P-PSDB;
                                                                                             Bordon-Pallier F,
                                                                                                                         10-NOV-1998;
                                                                                                                                                     18-MAY-2000.
                                                                                                            (HMRI ) HOECHST MARION ROUSSEL.
                                                                                                                                                                  WO200028037-A1
                                                                                                                                                                                                                         Candida albicans.
                                                                                                                                                                                                                                    Transcription factor; CATFIIIA; DNA-binding protein; ribosomal RNA 5S gene; fungal infection; ss.
                                                                                                                                                                                                                                                         DNA encoding a transcription factor designated CATFIIIA.
                                                                                                                                                                                                                                                                          04-SEP-2000
                                                                                                                                                                                                                                                                                       AAA15398;
                                                                                                                                                                                                                                                                                                    AAA15398 standard; DNA;
                                                                          AAY93316.
                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                         98FR-00014147.
                                                                                                                                       99WO-FR002739.
                                                                                                                                                                        /*tag= a
/transl_except= (pos:
/transl_except= (pos:
                                                                                                                                                                                                   Gocation/Qualifiers
720. .1958
                                                                                             Camier S,
                                                                                                                                                                                                                                                                                                    2060
                                                                                                                                                                                                                                                                                                    BP.
                                                                                              Sentenac
                                                                                                                                                                              1296. .1298, aa:
1734. .1736, aa:
                                                                                             Þ
                                                                                                                                                                             Ser)
```

useful as antimycotic agents,

Claim

4;

Page 32-33; 45pp; French.

The present sequence encodes a Candida albicans transcription factor, designated CATFILIA. The polypeptide is a DNA-binding protein, which is involved in initiating transcription of the ribosomal RNA 5S gene. The polypucleotide is used to screen for its specific inhibitors, potential

to raise an

antibody response that is

potentially

18

New nucleic acid encoding Candida albicans transcription factor, useful e.g. in screening for antimycotic agents and for immunization.

```
문
                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                          ď
                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                  몂
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                용양
                                                                                                                                                                                                                                                                                                  8 B
                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                           Дb
                                                                             Ŋ
                                                                                                   뮹
                                                                                                                δ
                                                                                                                                Db
                                                                                                                                                   Š
                                                                                                                                                                     8
                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                В
          S
                           멂
                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Sim
Matches 2060;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protective against fungal infection and to raise antibodies. Such antibodies, as well as the polypeptides and polynucleotides are used compositions for diagnosing and treating fungal infections, e.g. by detecting polymorphisms and mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
            901
                                                                                                                                        661
                                                                                                                                                                                            601
                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                              301
                                                                781
                                                                                  781
                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2060 BP;
                                                                                                                                                                                                                                                                                                                                                                                                ATTGTGATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCG
                                                                            GTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCAT
                                                                                                    AAAAATAAACAGCGGACCTCATCTTTTTTTCAAATCCACTTTTTATTACTTTATTCAA
                                                                                                                                                                                                               GGACATCTCGTTCCCCTTGTGAAGGGTCGTCTGTAATGAATTCATGATCAAGAATAATAT
                                                                                                                                                                                                                                                                                                                                                              TATTGTCACGGGCTTTAGAATTTGTATAATTGTGTGTGTCTGACACTCTGTGGTTAATATCT
                                                                                                                                                                                                                                                                                                                                                                     TATIGICACGGGCTITAGAATIIGTATAATIGIGTGTGTCTGACACICTGIGGTTAATATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAGTAAATATCCAATCATTGGGCTTCAGTGTGAATGGGGGGTTGTCAATCTCTTGGTGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAGTAAATATCCAATCATTGGGCTTCAGTGTGAATGGGGGGTTGTCAATCTCTTGGTGTAG
                                         TATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACG
                                                                 GTCCCAAAAAGTATATTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCAT
                                                                                                                                                                                     GGACATCTCGTTCCCCTTGTGAAGGGTCGTCTGTAATGAATTCATGATCAAGAATAATAT
                              TATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACG
                                                                                                                                                                            100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     726 A; 315 C; 354 G; 665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 2060;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ħ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                    840
                                                                                                                                                           720
                                                                                                                                                                              660
                                                                                                                                                                                               660
                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                               360
                                                900
                                                                   840
                                                                                                                                           720
              960
                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유 상
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뮰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                             유 성
                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                      B 8
                                                                                                                                                                                                                                                                                                                                                                                                      Б
                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                             뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮰
                                                                                                                                                  유
8
                                                                                                                                                                                  Ъ
                                                                                                                                                                                                 AG
AG
                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                             A 4
                                                                                                                                                                                                                                                                                                                                   망
                                                                      유
                                                                                                           유
     밁
                 Ş
                                        밁
                                                     Š
                                                                                                                                                                                        1681
                                                                                                                                                                                                                                                                                                                   1501
                                                                                                                                                                                                                                                                                                                                      1441
                                                                                                                                                                                                                                                                                                                                                                                                            1321
                                                                                                                                                                                                                                                                                                                                                                                                                              1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1141
                                                                                                                                                    1741
                                                                                                                                                                                                                          1621
                                                                                                                                                                                                                                           1621
                                                                                                                                                                                                                                                                                                  1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1021
                                                                                                                                                                      1741
                                                                                                                                                                                                         1681
      1981
                      1981
                                         1921
                                                           1921
                                                                             1861
                                                                                               1861
                                                                                                                                                                                                                                                                               1561
                                                                                                                 1801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGTGATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCG
                                                                                                                                                                                                                                                                                                                                                                       AAAAAAAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGA
                                                                                                                                                                                                                                                                                                                                                  AAAATGAATTAGTTGAACATTATAATATCTTCCATGATGGTAATATCCCTGATGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                            AATGTGGTAAAGGTTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                     AATGTGGTAAAGGTTGTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAATGTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGTGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGTGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAA
                                                                                                                                                              GTGGGAAGAATCAATTGTCCTAAGAATAATTGTGATAGAATGTTTTCTAGAGAATATG
                                                                                                                                                                                               TAAAATCATTTACTGCTTCTTTGGAAGGTTCAAAGAGTTTTCTAAACTTATTCTGAATA
                                                                                                                                                                                                                          ATAGTCTAGATGAAAAAAGAAGTGATGTTAGATCAGACTCAATGTCAGCTCAAAGATCAA
                                                                                                                                                                                                                                      ATAGTCTAGATGAAAAAAGAAGTGATGTTAGATCAGACTCAATGTCAGCTCAAAGATCAA
                                                                                                                                                                                                                                                                        TAAAGGAAACTGAAGTGAAAAAATTAGAGAACCTATTAGATCAAGGATCGAAATTTAAATA
                                                                                                                                                                                                                                                                                                                                     AAAATGAATTAGTTGAACATTATAATATCTTCCATGATGGTAATATCCCCTGATGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                AAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAATGTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTTCC
                                                                                        ATAGTATAGAAAAAGAAGAAACTCCAGAAGGTGAACCATTGGTTAAAAAAGCCAGGATGG
                                                                                                                            ATTTACGTCGACATTTGAAATGGCATGATGATAATTTACAAAGAATTGAGTCATTCTTAA
                                                                                                                                                   TAAAATCATTTACTGCTTCTTTGGAAGGTTCAAAGAGTGTTTCTAAACTTATTCTGAATA
                                                                                                                                                                                                                                                              TAAAGGAAACTGAAGTGAAAAATTAGAGAACCTATTAGATCAAGGATCGAAATTAAATA
      CATTTTTATTTCCTTTAATTTTTATTTTTGTGGGCTTTTTATTTTACATTATTTAACTT
                 CATTTTATTTCCTTTAATTTTTATTTTTGTGGGCTTTTTATTTTACATTATTTAACTT
                                         ATTTATTGCCAAATGAAACATCAGTGATTTCTCGATAATATACATTTAAAATTATATTAA 1980
                                                                              ATAGTATAGAAAAAGAAGAAACTCCAGAAGGTGAACCATTGGTTAAAAAAAGCCAGGATGG
                                                                                                                 ATTTACGTCGACATTTGAAATGGCATGATGATAATTTACAAAGAATTGAGTCATTCTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1080
                                                                                                                                                                                                                                                                                                                      1560
                                                                                                                                                                                                                                                                                                                                        1500
                                                                                                                                                                                                                                                                                                                                                                           1440
                                                                                                                                                                                                                                                                                                                                                                                            1440
                                                                                                                                                                                                                                                                                                                                                                                                               1380
                                                                                                                                                                                                                                                                                                                                                                                                                                 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1140
                                                                                1920
                                                                                                                   1860
                                                                                                                                                       1800
                                                                                                                                                                       1800
                                                                                                                                                                                                                                                                                                     1560
                                                                                                                                                                                                                                                                                                                                                          1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       960
                         2040
        2040
```

```
RESULT 2

ABZ32206

ID 32206

AC ABZ3

AC Cand

AC ELI

AC CAND

A
                                                       CC recombination, of a promoter replacement fragment with a heterologous CC promoter, so that expression of the second allele is regulated by the CC promoter. (M1) is useful for constructing a strain of diploid fungal CC cells in which both alleles of a gene are modified. The diploid fungal CC cells having both alleles modified are useful for identifying a gene that CC is essential to the survival or growth of a fungus, a gene that contributes to the virulence and/or pathogenicity of a fungus, a gene CC that contributes to the resistance of a diploid fungus to an antifungal agent that inhibits the growth of a diploid fungus agene CC and for identifying a therapeutic agent for treatment of a mammalian CC disease. (M1) is useful for identifying a compound which modulates the CC activity of a gene product, preferably enzymatic activity, carbon CC compound catabolism, biosynthetic, transporter, transcriptional, CC translational, signal transduction, DNA replication and cell division CC activity. The method is useful for identifying a compound having the CC ability to inhibit growth or proliferation of C. albicans cells and for treating infection by C. albicans. The present sequence is that of an CC essential Candida albicans gene used in the method of the invention. CC Specification but is based on sequence information supplied to Derwent by the European Patent Office
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ž
Sequence 1239 BP; 481 A; 171 C; 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Constructing strains for identifying gene products as effective targets for therapeutic intervention, by inactivating in the strain one allele of a gene and placing other allele of the gene under conditional expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          one allele by insertion or replacement by a cassette having an expressible selectable marker and modifying other allele by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 37; SEQ ID NO 6493; 167pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to constructing (M1) a strain of diploid cells in which both alleles of a gene are modified, comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-PSDB; ABP73656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Roemer T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-DEC-2000; 2000US-0259128P.
20-FEB-2001; 2001US-00792024.
22-AUG-2001; 2001US-0314050P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fungus; yeast; tetracyclin; promoter; GRACE strain; biosynthesis; signal transduction; DNA replication; cell division; growth; proliferation; Candida albicans; fungicide; antifungal; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-DEC-2001; 2001WO-US049486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200253728-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Candida albicans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABZ32206 standard; DNA; 1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ELIT-) ELITRA PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABZ32206;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-566694/60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    albicans essential gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACATATTACTCTCTTAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACATATTACTCTCTTAATG 2060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jiang B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Boone C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bussey H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 6493.
G.
   372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ohlsen KL;
T; 0
₽,
Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         l fungal
y modifying
```

1740 ACTICICANGNACATORATORATORATORATORATORATORATORATORATOR	5
AAAATCATTTACTGCTTCTTTGGAAGGTTCAAAGAGTGTTTCTAAACTTATTCTGAAT 102	Db
леттастветтеттевраветтелалеритеттеталасттаттет 	VΩ
	DЬ
гстадатдаалаалдаадтдатдттадатсадастсаатдтсадстсалад	γQ
841 AATTTGCATGAATTAGAAACAGAGAGAAATTAAAAGTGGAAGAAGATGAAGAAGATGAAGAA	Db
NTTAGAAACAGAGAAATTAAAAGTGGAAGAAGATGAAGAAGATGAAGAA	γQ
00	Db 4
	र
1440 AAAAATGAATTAGTIGAACATTATAATATATCTTCCATGATGATATATCCCTGATGATTTA 1499	g 4
61 GATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGATGTGGGGAAATTTTGC	g Db
ATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGATGTGGGGAAATTTTGC	99
601 AAATGTGGTAAAGGTTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCATGAT 660	Db
TGTGGTAAAGGTTGTGTTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTC	VQ
ACTTGGTCAGTATTACAATTTCATATAAAACTAACTGCATCCAAAACTTAAATGTCCT 60	Db
ACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAAATGTC	γQ
CAICAIGGTGGAICTCCIGCTTAICAAIGTGAICAICCTGGTTGTTTTAAAAATTTC 54	Ф
TGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAA	Qy
TAAACAATGTAATAAAGTTTTCACTCGACCTTC	Db
GTGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAA	Qy
ATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAAACATTA 42	дь
CATTITATAAACATCAATCITTAAGACATCATATATTATCIGTICATGAAAAAACATTA 1	γQ
	DЪ
ACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAA 10	γQ
	DЬ
AAAAAAAACCATTCCATTGTTCAGTGTGTGTAAAGGGGTTAATTCTCGACAACAC	δ
81 GATTGTGATAAAGCATTTTTCAGAAAATCACATTTTGGAAACACATATTGTATCACATTTCC 24	DЪ
IGATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCC 95	β
]H	Db
; Срасаттталдалсссасадтаатдатсдассдтаталатдтасадтдд	8
61 CGTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCA 120	Db
GICCCAAAAAGTATATTIGGACATATGAAGGGIGIGATAAAGCCTATAATCGACCATCA 8	Qy
ATCA 60	Db
STGAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCTTCATCA 77	Qγ
. Match 60.0%; Score 1235.8; DB 6; Length 1239; Local Similarity 99.8%; Pred. No. 9.7e-217; Local Similarity 99.8%; O; Mismatches 2; Indels 0; Gaps 0;	Query Best L Matche

Ś

1740 AGTGGGAAGAAGATCAATTGTCCTAAGAATAATTGTGATAGAATGTTTTCTAGAGAATAT 1799

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
              밁
                                            8
                                                                                    Matches
                                                                                                   Query Match
Best Local (
                                                                                                                                                                                        The present invention relates to novel human secretory or membrane proteins (ADA54072-ADA55710) and their coding sequences (ADA52433-ADA54071). The coding sequences are useful in the gene therapy of diseases caused by abnormalities of the proteins, e.g. cancer, inflammatory diseases, osteoporosis or neurological disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cytostatic; Anti-inflammatory; Osteopathic; Neuroprotective; Nootropic; Gene Therapy; human; secretory protein; membrane proteins; cancer; inflammatory disease; osteoporosis; neurological disease; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADA53158 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-SEP-2001; 2001JP-00328381
24-JAN-2002; 2002US-0350435P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EP1293569-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                 Claim 1; SEQ ID NO 726; 205pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yamamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-MAR-2002; 2002EP-00006586
                                                                                                                                                         Sequence 2132 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (REAS-)
                                                                                                                                                                                                                                                                                                                                polynucleotides encoding full-length polypeptides, e.g. secretory /or membrane proteins, useful for developing medicines for diseases ch the gene is involved, or as target molecules for gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1800
                1384
                                                                                                                                                                                                                                                                                                                                                                                                      2003-395539/38.
DB; ADA54797.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Į,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HELIX RES INST.
RES ASSOC BIOTECHNOLOGY
                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTGGGAAGAAGATCAATTGTCCTAAGAATAATTGTGATAGAATGTTTTCTAGAGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATTTACGTCGACATTTGAAATGGCATGATGATAATTTACAAAGAATTGAGTCATTCTTA
                                                   GAAAGTGACGAAATCGATATCATCTTTAATATCTTCTTCTTCATCACGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATTTATTGCCAAATGAAACATCAGTGATTTCTCGATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATTTATTGCCAAATGAAACATCAGTGATTTCTCGATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATAGTATAGAAAAAGAAACTCCAGAAGGTGAACCATTGGTTAAAAAAAGCCAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATAGTATAGAAAAAGAAGAAACTCCAGAAGGTGAACCATTGGTTAAAAAAAGCCAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATTTACGTCGACATTTGAAATGGCATGATGATAATTTACAAAGAATTGAGTCATTCTTA
                GAATGTGGCAAAGCTTTTAACCAGTCCTCAATCCTTACTACACATAAGAGAATTCATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yoshikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sugiyama
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Isono
                                                                                                                                                          833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                     4.8%;
                                                                                                                                                         A; 423 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Otsuki T, Wakamatsu A,
Hio Y, Otsuka K, Nagai
Otsuka M, Nagahari K, M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2132
                                                                                    Score 99.4; DB 7;
Pred. No. 6.6e-09;
0; Mismatches 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                                                                                                                                                          347 G;
                                                                                                                                                            529
                                                                                                                                                          H;
                                                                                        281;
                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                              A, Sato H, Is Ai K, Irie R, Masuho Y;
                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1958
                                                                                                                     Length 2132;
                                                                                        Indels
                                                                                                                                                            0
                                                                                                                                                            Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ishii
                                                                                        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tamechika
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  s
                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŗ,
                                                                                                                                                                                                                                                                                                                                                            Ħ
                                                                                      2;
 RRESULT 4
ACASO
XX ACASO
XX ACASO
XX ACASO
XX CDNI
XX CDNI
XX CDNI
XX CONI
XX COLI
XX ACASO
XX ACASO
XX COLI
XX ACASO
XX ACASO
XX Huma
XX Immu
XX Immu
XX Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
14-SEP-2001;
21-SEP-2001;
28-SEP-2001;
19-OCT-2001;
25-JAN-2002;
22-FEB-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-JUL-2003
                                                                                                          07-SEP-2001;
07-SEP-2001;
                                                                                                                                                                05-SEP-2002;
                                                                                                                                                                                                   20-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            906
```

```
786 АЛАЛАСТАТАТТТССАСАТАТСААСССТСТСАТАЛАСССТАТАЛТССАССАТСАТТАТТА
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGAACATAAGAAATTCATACTGGAGAGAAACCCTACACATGT-----GAAGAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGAGAATCCTACAAATGTGAAGAATGTGGCAAAGCTTTCTATCGATCCTCAAAACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAACCATTCCATTGTTCAGTGTGGTAAAGGGGGTTAATTCTCGACAACACTTGAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                                     CATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTTCCAA
                                                                                                                                                                                                                                      CCTAAAAGATGTAACAGTGATTTTGAAAACACTTCAAAGTTTTCTAAACATAAAAGAAAT
                                                                                                                                                                                                                                                                                                                                                       AACCAGTCCTCAAACCTTACTGGACATAAGAAATTCATACTGGTGAGAAACTCTACAAA
                                                                                                                                                                                                                                                                                                                                                                                                           таталасатсалттал---- дасатсатататтатстдттсатдалалалаласт
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCAAAGCCTTTAACCACTCCTCACACCTTGCTACACATAAGGTAATTCATACTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATAAAGCATTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA
                                                             ACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACT
                                                                                                                                                                                                                                                                                             ТGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATAAGAGAATTCATACTGGAGAGAAACCCCTACCAATGTGAAAAATGTGGCAAAGCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAACCCTACCAATGTGAAGAATGTGGTAAAGCCTTTAACCAGTCCTCACACCTTACTAGA
ACTTGATTGTGCATAAGATAATTCATACTAAAAAAAAACCTATAAGT
                                                                                                                    TATGCTGGTGAGAAATCTTAGAAATGTGAAGAATGTAACAAAACCTTTAAAAAGTTGTCAC
                                                             1309
         1964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            845
                                                                                                                                                                                                                                                                                                      1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1503
                                                                                                                             1917
                                                                                                                                                                                     1262
                                                                                                                                                                                                                                               1857
                                                                                                                                                                                                                                                                                                                                                                                                                        1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           905
```

neurological disorder; epilepsy; Huntington's disease; strolimmune disorder; inflammatory disorder; AIDS; allergy; developmental disorder; Hypothyroidism; Cushing's syndrome; protein-protein interaction; drug-target interaction; gene expression profile; gene; ss. anticonvulsant; nootropic; neuroprotective; cerebroprotective; antiallergic; antiinflammatory; thyromimetic; gene therapy; cell proliferative disorder; cancer; atherosclerosis; Human; nucleic acid-associated protein; cytostatic; antiarteriosclerotic; cDNA encoding ACA98970 standard; WO2003023003-A2 (first 2002WO-US028540 2001US-0346716P. 2002US-0351749P. 2001US-0324040P. 2001US-0326732P. 2001US-0322270P. 2001US-0317912P. human CDNA; nucleic entry) 1705 acid-associated protein (NAAP) #51 ΒP

infection;

anti-HIV;

```
맑
                                                                                                                      δÃ
                                                                                                                                                                망
                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                               Вb
                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                γ
        뮍
                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                          당
                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 266;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 proliferative (e.g. cancer, atherosclerosis), neurological (e.g. epilepsy, Huntington's disease, stroke), immune/inflammatory (e.g. AIDS, allergies) and developmental (e.g. Hypothyroidism, Cushing's syndrome) disorders, or infections. These are also useful in assessing the effects of exogenous compounds on the expression of nucleic acid and amino acid sequences of NAAP. The NAAP or its fragments are useful in screening compounds for effectiveness as agonist or antagonist of the polypeptides, or in altering the expression of the target polynucleotide and compounds that specifically bind to or modulate the activity of the polypeptide. The microarray is useful in monitoring or measuring protein-protein interactions, drug-target interactions, and gene expression profiles. This sequence encodes a novel human nucleic acid-associated protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1705 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention describes a novel human isolated nucleic acid-associated polypeptide (NAAP). The polypeptides and polynucleotides are useful in diagnosing, treating and preventing diseases or conditions associated with the decreased expression or overexpression of NAAP, such as cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New human nucleic acid associated proteins (NAAP), useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant NAAP expression e.g. cancer, AIDS, atherosclerosis, epilepsy, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tang YT, Jackson JL, Griffin JA, Elliott VS, Forsythe IJ;
Becha SD, Richardson TW, Lee EA, Sprague WW, Emerling BM;
Thangavelu K, Warren BA, Tran UK, Yue H, Xu Y, Yue H, Li JX;
Hafalia AJA, Sanjanwala B, Marquis JP, Gorvad AB, Lee SY, Ison
Baughn MR, Chawla NK, Nguyen DB, Swarnakar A, Zebarjadian Y, St
Thornton M, Yao MG, Khan FA, Gandhi AR, Yang J, Kable AE;
Burford N, Damyumar T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; ABU96722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (INCY-) INCYTE GENOMICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
      1033
                                             1070
                                                                                                                           1010
                                                                                                                                                                  913
                                                                                                                                                                                                                                                 859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2003-313243/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5; Page 340-341; 345pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
ATGTGTTAGAGCTTTTAACCAAGCCTCAAAGCTTACTGAACATAAGTTAATTCATACCGG
                                                                                                                  АСААСАСТІGААЛАGАСАІGААЛІСАСССАТАСЛАЛІСТІТЛАЛІТІЛАСАГІТІGАЛАЛ 1069
                                                                                                                                                          AATTCATACTGAAGAGAAACCCTACAAATGTGAAGAATGTGGCAAAGCCTTTAACCAGTC
                                                                                                                                                                                     TCGACCATCATTATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATG
                                       TIGICAAGAAGCATITTATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGA 1129
                                                                               ATCGACCCTTACTACACATAATATAATTCATACTGGGGAAATTCCCTACAAATGTGAGAA
                                                                                                                                                                                                                                                                               TACAGTGGACGATTGTGATAAAGCATTTTTCAGAAAATCACATTTTGGAAAACACATATTGT
                                                                                                                                                                                                                                                                                                                      CTGGTCCTCAACCCTTAATAAACATAAGAGAATTCATACTGGAGAAAAACCTTACAAATG
                                                                                                                                                                                                                                                                                                                                                                                                 TAAAAGAATCCAAACTÁGÁGTGAÁTTTCTACÁAATGTGÁÁGCATATGGAAGAGCCTTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCTTCATCACGTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACATTTTAAATGTAACGAATGTCGCAAAACATTTTGCATGCTTTCACACCTAACTCAACA 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTITATICAATGAGIGAAAGIGACGAAACCAAATCGATATCATCITTAATATCITCTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ramkumar J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               622 A;
                                                                                                                                                                                                                                         -GAATGTGGCAAAGCCTTTAACCAGACCTCACACCTTATTAGACATAAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 98.4; DE
Pred. No. 9.8e-
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314 G; 464 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98.4; DB 8;
No. 9.8e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1705;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acid-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Shah P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (H;
                                                                                                                                                                                                 1009
                                                                                                                                                                                                                                                                                                                                                                                                                                           829
                                                                                                                                                            972
                                                                                                                                                                                                                                                                                                                                                                                                   798
                                                                                                                                                                                                                                         912
                                                                                                                                                                                                                                                                               949
                                                                                                                                                                                                                                                                                                                      858
                                                                                                                                                                                                                                                                                                                                                            889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        769
```

```
RESULT 5
ACA56456
ID ACA5
XX ACA5
XX ACA5
XX ACA5
XX Huma
XX H
                                                                                                                                                                         CC array element in a microarray for monitoring the expression of a number of target polynucleotides. The microarray is particularly useful in the CC diagnosis and treatment of cancer and immunopathology and neuropathology. The microarray is useful in diagnostics and treatment regimens, drug CC discovery and development, toxicological and carcinogenicity studies, CC forensics and pharmacogenomics. The microarray is also useful for CC monitoring progression of diseases and for developing sophisticated CC profiles for the effects of currently available therapeutic drugs. The CC combination is also useful for purifying a subpopulation of mRNAs, cDNAs and genomic fragments and in research and diagnostic applications. The CC array can detect changes in expression in a large number of genes coding CC crimunopathies e.g. AlDS and asthma, neuropathies e.g. Alzenimer's disease compared to the invention. Note: The sequence represents a polynucleotide combe of the invention. Note: The sequence data for this patent did not form are for the receif carrier but a contract in a later material and in the contract of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to a combination which, comprises a number of polynucleotide probes comprising a sequence selected from one of the 1490 sequences mentioned in the specification. The combination is useful as an array element in a microarray for monitoring the expression of a number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Combination of polynucleotide microarray for monitoring the
                                                                                                                   form part of the printed specification but was obtained in format directly from USPTO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; probe; ss; array element; Parkinson's disease; signalling pathway population; cancer; adenocarcinoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Au-Young J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (INCY-) INCYTE GENOMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US6500938-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACA56456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACA56456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           signalling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 1054; 65pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A---AAAACATTAACGTGTAAAACGATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGACCATAAAAAAATTCATACAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAACATAAATTAAAACATCATGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAGAAATGCTACAAATGTGAAGAATGTGGCAAAGTTTTTAACCGATCTTCAAACCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                          .gov/sequence.html?DocID=06500938B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-00016434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-00016434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pathway
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         population; cancer; adenocarcinoma; leukaemia;
asthma; neuropathy; Alzheimer's disease; microarray.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ĮĮ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polynucleotide probe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            probes, useful as array elements expression of a number of target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1186
```

Query Match
Best Local Similarity
Matches 306; Conser

Conservative

0;

51.3%; 4.78;

Score 96.6; D Pred. No. 2.2e 0; Mismatches

2.2e-08; DB 7;

Length 2320; Indels

12;

Gaps

Ψ

Sequence

2320

BP;

903 A; 423

C; 412

G; 582 T; 0 U;

0 Other;

```
RRESULT 6
AAS9137
ID AAS9
XX AAS9137
XX AAS9
XX AAS9
XX AAS9
XX AAS9
XX Homa
XX Homa
XX Homo
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  돲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                    31-MAR-2000; 2000US-00540217.
23-AUG-2000; 2000US-00649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAS91317 standard; cDNA; 4563
                                                          WPI; 2001-639362/73
                                                                                                                                                                                                                                                                                                                                               30-MAR-2001; 2001WO-US008631
                                                                                                                                                                                                                                                                                                                                                                                                             11-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA encoding novel human diagnostic protein #27121.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1024 TACCCATAGAAAATTCATACTGGAGAGAAACCTTACAAATGT-----GAAGAATGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 n; chromosome mapping; gene mapping; gene
supplement; medical imaging; diagnostic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            908 TAAAGCATTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAAAA
                                                                                                                           RT,
                                                                                                                                                                                      HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGTAAAGGTTGTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCATGATGA 1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTTACTGAACATAAGAAATTCATACTGGAGAAAACCCCTA---TGAATGTGAAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAATGTCCTAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACTGGAGAAGCCTTACAAATCTAAAGAATGTGAAAAAGCTTTTAACCAATCCTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTTCCAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAAAGAATGTGGTAAAGCTTTTAAACACTCTTCAACCCTTACTAAACATAAGATAATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAGGTBATTCATACTGGAGAGAAACCCTACAAATGTGAAAAATGTGGAAAAGCCTTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCATTCCATTGTTCAGTGTGTGGTAAAGGGGGTTAATTCTCGACAACACTTGAAAAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAAAGCCTTTAAGCAGTCCTCAAACCTTACTACACATAAGATAATTCATACTGGAGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGAGAAACCCTACAAATGTAAAGAATGTGGTAAAGCTTTTAACCGATCTTCAACCCTTAC 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCATTTCTCACACCTTACTACACATAAGATAATTCATACTGGAGAGAAACCTTACAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAAACA---TCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCCTACAAATGTAAAAAATGTGGAAAAGCCTTTAACCAGTCTGCACACCTTACCACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGCAAAGCTTTTAACCAGTCCTCAAATCTTACTAGACATAAGAAAAGTCATACAGA
                                                                                                                           Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                           Tang
                                                                                                                                  Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genetic d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 1437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              847
```

Ş

뭥

```
New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity.
```

SEQ ID NO 27121; 103pp; English

The invention relates to isolated polynucleotide (I) and polypeptide (II) (II) sequences. (I) is useful as hybridisation probes, polymerase chain (II) reaction (PCR) primers, oligomers, and for chromosome and gene mapping, (II) and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed (I) is useful in gene therapy techniques to restore normal (II) activity of (II) or to treat disease states involving (II). (II) is (II) is (III) are useful in tissue, as molecular weight markers and as a food (II) peptide in tissue, as molecular weight markers and as a food (II) supplement. (II) and its binding partners are useful in medical imaging (II) of sites expressing (II). (I) and (II) are useful for treating disorders (Involving aberrant protein expression or biological activity. The (II) aberrant protein expression or biological activity. The (II) approximate of the sequences have applications in (II) and to produce other types of data and products dependent on DNA and (II) amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic coding sequences of the invention. Note: The sequence data for this (II) calculation in the printed specification, but was obtained in the printed specification, but was obtained in the content of the printed specification. ftp.wipo.int/pub/published_pct_sequences

Sequence 4563 BP; 1752 A; 814 C; 824 G; 1173 T; 0 U; 0 Other;

Ş Matches 258; Query Match Best Local Similarity GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCATCACGTCCC Conservative 4.6%; 0; Mismatches 223; Score 95.2; Pred. No. 4 ; DB 5; 1.2e-08; Length Indels 9; Gaps 785 2

1489 1609 1549 1315 1669 1026 906 GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT 905 GGAGGGAAAACCTACAAATGTGAAGAATGTGGCAAAGCTTTTAACCATCTTTCAGCCCTT AAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA GAATGTGGCAAAGCCTTTAACCAGTCCTCACACCTTACTCAACATAAAACAATTCATACT CATCATGGTG 1212 ТСТВААСВАТСТААТВАВАСТТТТСАСТССВАССТТСВАВАТТАССВСВАСАТВАВАТТВВАВ 1202 AGCCAGTCCTCAACCCTTAGAAACCATCAGATAATTCATACTGGAGAGAAACCCTACAAA TATAAACATCAATCTTTAAGA----CATCATATATTATCTGTTCATGAAAAAAACATTAACG CATAAGATAATTCATACTGGAAAGAAACCCTACAAATGTGAAGAATGTGGGAAAGCTTTT CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTT AAACCCTACAAATGTGAAGAATGTGGCAAAGCTTTTAACCATTTCTCAGAACCTTAGAAGA AAACCATTCCATTGTTCAGTGTGGTAAAGGGGGTTAATTCTCGACAACACTTGAAAAGA 1025 GGCAAAGCTTTTAGGCAATCCTCACACCTTACTAGACATAAAGCAATTCATACTGGAGAG 1548 GATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA 965 **ACTANACATAAGATAATTCATACTGGGGAGAAACCATACAAATGT** CATACTGGAG 1798 TGTGAAGAATGTGGTAAAGCTTTTAAGTGGTCATCAAAACTTACTGTACATAAGGTAATT -GAAGAATGT . 1608 845 1668 1085 1488 1434 1374

밁

8

밁 Ş Дb 8 밁 Š g

RESULT

Š 뮹 δ 뮍 8

δ 片 S

뭐

```
밁
                                                  S
                                                                                                                     Query Match
Best Local
                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arvicu Gri
Ramkumar J, Gri
Borowsky ML, Ya
Bordson TW,
                                                                                                                                                                                                                               disorders (e.g. arteriosclerosis, atherosclerosis, cirrhosis, hepatitis or cancer); developmental disorders (e.g. renal tubular acidosis, anaemi or mental retardation); neurological disorders (e.g. Alzheimer's disease Parkinson's disease or epilepsy); and autoimmune/inflammatory disorders (e.g. AIDS, allergies, asthma or Crohn's disease). The DNA sequences of the invention are useful for creating transgenic animals to model human disease. The present DNA sequence encodes a human nucleic acid-associate
                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                            The invention comprises the amino acid and coding sequences of human nucleic acid-associated proteins (NAAP). The DNA and protein sequences of the invention are useful for diagnosing, treating or preventing disorders associated with aberrant expression of the control of the c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     neurological (e.g. epineurological (e.g. AIDS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New nucleic acid-associated proteins and polynucleotides, useful for diagnosing, treating or preventing cell proliferative (e.g. cancer), neurological (e.g. epilepsy or Parkinson's disease), or autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-JUL-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN-2001;
29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cancer; developmental disorder; renal tubular acidosis; anaemia; asthma;
mental retardation; neurological disorder; Alzheimer's disease; epilepsy;
Parkinson's disease; autoimmune disorder; inflammatory disorder; allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (INCY-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-MAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-JUN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO2003000864-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAL51569;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAL51569 standard; DNA; 2597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-APR-2003
             1070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2003-201420/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       n; gene; ds; no
proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -2001;
                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INCYTE GENOMICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA016419
                                                                                                                                                                              2597
TTATAAATGTGAAGAATGTGGCAAAGCCTTTAATGTGTCCTCAACCTTACTCAACATAA 1129
                                       TIGCACATAIGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGAGCAACATTT 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page
                                                                                                                                                                                                                          the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; 2001US-0301787P;
; 2001US-0301792P;
; 2001US-0301892P;
; 2001US-0301893P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Swarnakar A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001US-0303405P
2001US-0303442P
2002US-0364438P
                                                                                                                                                                              BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Griffin JA, Yang J
Yao MG, Walia NK,
W, Elliott VS, Luo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001US-030051BP.
2001US-0301787P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002WO-US021179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ds; nucleic acid-associated protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first
                                                                                                                                                                                                                        invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acid-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ·
ΩH,
                                                                                                                                                                            947 A; 504 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                transgenic animal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          disorder; atherosclerosis;
tal disorder; renal tubular
                                                                                                              4.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Honchell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                u, Hafalia AJA, Warren BA, Emeronchell CD, Lee EA, Yue H, Fo A, Yang J, Sanjanwala MM, Baug Walia NK, Bandman O, Lal PG, t VS, Luo W, Tang YT, Zebarjac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           312pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INC
                                                                               Score 94.6; DE Pred. No. 5.1e-0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein coding
                                                                                                                                                                            505 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                animal model.
                                                                                                                                                                          641 T;
                                                                                                              1e-08
                                                                                                                                  DВ
                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cirrhosis; hepatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zebarjadian
                                                                                                                                                                        Ų;
                                                                                                                              Length 2597;
                                                                                        Indels
                                                                                                                                                                                                                                   nucleic acid-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAAP;
                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baughn MR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Emerling
                                                                                                                                                                        Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Forsythe IJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Becha SD,
dian Y, Lu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    arteriosclerosi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ
                                                                                    9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ij
                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No
                                                                                                                                                                                                                                                                                                                     disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Υ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rosis;
AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SY;
```

```
RESULT 8
AAS64586
ID AAS6
XX AAS6
XX AAS6
XX AAS6
XX DNA
XX HUME
XX HOME
XX HO
          The invention relates to isolated polynucleotide (I) and polypeptide (I sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also use in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating antibodies against it, detecting or quantitating
                                                                                                                                                                                                                                                                                                                Claim 1; SEQ ID NO 390; 103pp; English
                                                                                                                                                                                                                                                                                                                                                                                      biodiversity.
                                                                                                                                                                                                                                                                                                                                                                                                          New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     food
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAS64586;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA encoding novel human diagnostic protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAS64586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-639362/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chromosome mapping;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HYSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABG00399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAAACATCATGGTG 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAACGTGTAAACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGATAAAGCATT 916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGCAAAGCTTTTAAGCGGTCCTCAAACCTTACTGAACATAGGATAATTCATACTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACAACTTACTACACATAAGATAATTCATACTGGAGAGAAACCCTACAAATGTAAAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCATACCGGAGAGAACCCCTACAAATGTGAAGAATGTGGCAAAGCCCTTTAACCAGTTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTATAA---ACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGTGAAGAATGTGGCAAAGCCTTTAACACATCCTCACACACCACACATAAAAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TIGTICAGIGIGGIAAAGGGGTTAATICTCGACAACACTTGAAAAGACATGAAATCAC 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAACGTGTCCTCAACTCTTACTCAACATAAGAGAATTCATACTGGAGAAAAACCATACAA 1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGAATTCATACTGGAGAGAAACCTTACAAATGT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         тттсадалалсясятттодаласасататтотатсясаттссдалалалалассаттсса
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-00540217.
2000US-00649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001WO-US008631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        medical imaging;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA; 3639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene mapping; gene therapy; forensic
maging; diagnostic; genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -GAAGAGTGTGGCAAAGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      forensic;
                                                                                                                                                                                                                                             polypeptide (II)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            976
```

polypeptide in tissue,

as molecular weight

quantitating a food

used

밁 S 밁 8 뮍 Š 뮍 Ś

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypuchide and polynucheotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic coding sequences of the invention. Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                          Human; ss; gene; pharmaceutical; diagnostic; gene therapy; tissue regeneration; cell regeneration; membrane protein; signal transduction-related protein; transcription-related osteoporosis; neurological disease; cancer; tumour.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                Human
                                                                                                                                                                                                                              04-DEC-2003
                                                                                                                                                                                                                                                               ADB63624;
                                                                                                                                                                                                                                                                                               ADB63624 standard; cDNA; 2110
                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1028
                                                                                                                                                                                                                                                                                                                                                                            1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  236;
                                                                                                                                                                                                  CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAAACATAAGAGAATTCATACTGGAGAGAAACCCTACAAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAGAAACCCTACAAATGTGAAGAATGTGGCAAAGCTTTTAGCCATTCTTCAACCCTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TARACATCAATC---TITTAAGACATCATATATTATCTGTTCATGAAAAACATTAACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCATTCCATTGTTCAGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAAGCTTTTAGCCGTTCTTCAACCCTTGCTAAACATAAGAGAATTCATACTGGAGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGA
                                                                                                                                                                                                                                                                                                                                                                            TACTGGAGAGAAACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                         TGAAGAATGTGGCAAAGCTTTTAATCGATCTTCAAATCTTACTATACATAAGTTTATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGACTCTCAACCCTTACTAAACATAAATAATACATGCTGGAGAGAACTCTACAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAAGATAACTCATACTGAAGAGAAACCCTACAAATGTAAAGAATGTGACAAAGCTTTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCCTACAAATGTAAAGAATGTGGCAAAGCTTTTAGCAATTCCTCAACCCTTGCTAATCA
                                                                                                                                                                                                                                                                                                                                                                                                         TCATGGTGGATCTCCT
                                                                                                                                                                                              encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B₽;
                                                                                                                                                                                                                              (first
                                 170.
/*tag= a
/product= "Clone THYMU20071120 protein"
                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1403 A; 708 C; 622 G; 906 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.5%;
                                                                                                                                                                                                  clone
                                                                                                                                                                                                                                entry)
                                                                                                                                                                                                THYMU20071120.
                                                                                                                                                                                                                                                                                                                                                                              1167
                                                                                                                                                                                                                                                                                                                                                                                                            1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 92.4;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                  ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches 191; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.3e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 3639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----GAAGAATGTGG
                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          797
```

밁 S 망 5

1367

GAATGTGGCAAAGCTTTTAACCGATCCTCAAAACTTACTGAACATAAGAAACTTCATACT

1426

GATTGTGATAAAGCATTTTTCAGAAAATCACATTTGGAAAACACATATTGTATCACATTCC 959

GGAAAGAAACCCTACAAATGTGAAGAATGTGGCAAAGCTTTTATCCAATCCTCAAAACTT GAAAAAAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTG 1019

AAAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAA

1079 1486 TTATTAGAGCAACATTTAAGAACCCCACAGTAATGATCGACCGTATAAATGTACAGTGGAC 899

GCCCTTACTACACATAAGAGAATTCACACTGGAGAGAAACCCCTACAAATGT-----

-GAA . 1366

4

1313

Š 밁 Š

```
The invention discloses a polynucleotide comprising a sequence selected crom 1970 fully defined nucleotide sequences which encode novel colored polypeptides. Also claimed is a polypeptide encoded by the polynucleotide or its partial peptide, an antibody binding to the polypeptide or peptide cor of the polynucleotide, immunologically assaying the polypeptide or peptide cor peptide of the polynucleotide by contacting the polypeptide or peptide cor peptide of the polynucleotide by contacting the polypeptide or peptide cor cor cor medical cor antibody of the encoded protein, and observing the binding cor superesible manner and an antisense polynucleotide. The ollogonucleotide cor superessible manner for synthesising the polynucleotide or as a probe cor detecting the polynucleotide. The polynucleotide and encoded cor proteins are useful as pharmaceutical agents and many disease-related cor medicines for regulation of them, for developing a diagnostic marker or cor medicines for regulation of the corrections, disease-related proteins and genes corrections, disease-related proteins and genes corrections, disease-related proteins and genes corrections, concer, tumours. The cDNA may be used to regulate the activity or expression of the encoded protein to treat diseases. The
₽
                                     Š
                                                                                 Matches
                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New polynucleotides and polypeptides, marker or medicines for regulation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           as targets of gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isogai T,
Yamamoto J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-NOV-2001;
25-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-MAR-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EP1308459-A2
                                                                                                                                                                                                neurological diseases, cancer, tumours. The CDNA may be used to regulate the activity or expression of the encoded protein to treat diseases. The sequence presented is a CDNA of the invention. Note: Some of the sequence data for this patent is not represented in the printed specification, but is based on sequence information supplied by the European Patent Office.
                                                                                                                                                            Sequence 2110 BP; 784 A; 394 C;
                                                                                                  Local
    1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2003-450961/43
                                                                               314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HELIX RES INST.
RES ASSOC BIOTECHNOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yoshikawa T,
                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page; 222pp; English.
                                       CGTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCA
  CATACCGAAGAGAAACCCTACAAATGTAAAGAATGTGGCAAAGCTTTTAAACACTCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sugiyama T,
                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001JP-00379298.
2002US-00350978.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2002EP-00007401.
                                                                                                  4.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Otsuki T, Wakamatsu A, Sato H,
Hio Y, Otsuka K, Nagai K, Irie
Otsuka M, Nagahari K, Masuho Y;
                                                                                 0,
                                                                                 Score 91.8; DB Pred. No. 1.6e-0; Mismatches
                                                                                                                                                                386 G; 546 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  useful
their e
                                                                                                        DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for developing
                                                                                                                         Length 2110;
                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oping a diagnostic and activity, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ,
R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ishii S;
R, Tamechika I;
                                                                                       16;
                                                                                       Gaps
          1312
                                                  839
```

```
맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
The invention relates to a novel human macroprotein-45.76, the encoding polynucleotide, an antagonist and a method of recombinant production. The protein of the invention may be useful for treating dementia, arrhythmia, asthma and diabetes. The current sequence is that of the human
                                                                                      New human macroprotein-45.76, encoding polynucleotide, antagonist recombinant production, useful for treating dementia, arrhythmia,
                                                          Claim 6;
                                                                                                                                                                                                        26-APR-2001;
                                                                                                                             P-PSDB;
                                                                                                                                                                                                                              26-APR-2001;
                                                                                                                                                                                                                                                      04-DEC-2002.
                                                                                                                                                                                                                                                                                                                                                                                                            Human macroprotein-45-76
                                                                                                                                                                                     (BIOW-)
                                                                                                                                                                                                                                                                           CN1382725-A.
                                                                                                                                                                                                                                                                                                                                                                                       human;
                                                                                                                                                                                                                                                                                                                                                                                                                                     18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADC56695;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADC56695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1727
                                                                                                                             2003-269486/27.
)B; ADC56696.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1487
                                                                                                                                                                                                                                                                                                                                                       sapiens
                                                                                                                                                                                                                                                                                                                                                                                 macroprotein-45.76; dementia; arrhythmia; asthma; diabetes; ss;
                                                                                                                                                             Xie
                                                                                                                                                                                    BIOWINDOW
                                                         SEQ ID NO 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGAATGTGTGATAATGATTTTGACAACACCTCAAATTTTTCTAAATATAAAAGGAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTAAATGTGGGTAAAGGTTGTGTTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTCCAAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCATTTTATAAACATCAATCTTTA---AGACATCATATATTATCTGTTCATGAAAAAAACA 1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATAATTCATACTGGAGAGAAACCCTATAAATGTGAGAGATGTGACAAAGCTTTTAACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTAAAACATCATGGTG-GATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTAACGTGTAAACAATGTAATAAAGTTTTCACTCGAGCTTCAAAATTAGCACAACATAAA 1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGAACATAAAAAATTCATTCTGGAGAGATACCCTACAAGTGTGAAGAATGTGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TACAAATGTGAAGAATGTGGCAAAGCTTTTAGCCGATCCTCAAAACTTACTGAACATAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTTTTAÅACACTCCTCÄTCCCTTACTÄCÄCÄTAÄÄÄÄÄATTCATACTGGGGAGAÄÄCCC
                                                                                                                                                                                                        2001CN-00112764.
                                                                                                                                                                                                                              2001CN-00112764
                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                              /*tag= a
/product= "Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1847
                                                                                                                                                                                   GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                         34pp; Chinese.
                                                                                                                                                                                   DEV INC
                                                                                                                                                                                                                                                                                                                                                                                                            CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -TACTAAACATAAAAAATACATACTGGAGAGAAACTACAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВÞ
                                                                                                                                                                                  SHANGHAI
                                                                                                                                                                                                                                                                                             macroprotein-45
                                                                                        asthma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1546
```

```
RESULT 11
ADB62468
ID ADB62468
AC ADB62
XX ADB62
XX Humar
XX Humar
XX Humar
XX Humar
XX Humar
XX Humar
XX CS Homo
XX Signa
XX Homo
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 257; Conserv
                       28-MAR-2002;
                                                                       07-MAY-2003.
                                                                                                                                                                                                                                                                                                                                     Human; ss; gene; pharmaceutical; diagnostic; gene therapy; tissue regeneration; cell regeneration; membrane protein; signal transduction-related protein; transcription-related osteoporosis; neurological disease; cancer; tumour.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-DEC-2003
                                                                                                                   EP1308459-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADB62468;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADB62468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       macroprotein-45.76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1126
                                                                                                                                                                                                                                                                                         sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard; cDNA; 3078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGGGAAAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGTGGATCTCC 1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAAATTAAAACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACATCAATCTTT---AAGACATCATATATTATCTGTTCATGAAAAAACATTAACGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATTCCATTGTTCAGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGACATG 1029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGAATGTGGCAAAGCCTTTAGAGTATTCTCAATTCTTAAAAAACATAAGATAATCCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTTCTCGATTCTTAATAAACATAAGAGAATTCATATGGAAGATAAACCCTACAAATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAGAATTCATACAGAAGAAACCCTACAAATGTGAAGAATGTGGCAAGGCCTTTAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTACAAATGTGAAGAATGTGGCAAAGCTTTTAACCGGTCCTCAACCCTTACTAAACATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGTATTCTTACAAATGTĞAAĞAATĞTĞGTAAAĞCCTTTAACTĞGTCCTCAACCCTTACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGGCAAATCATTTTGCATGCTTTCACAATTAACTCAACATAAGAAAATTCATACTAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACATAAGATAATTCATACTGGAGAAAAACCCCTACAAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.5%;
ilarity 52.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP; 1016 A; 463 C; 499 G; 782 T; 0
                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                              /*tag= a
/product= "Clone FEBRA20063720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEBRA20063720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 91.8; DB 9;
Pred. No. 1.7e-07;
0; Mismatches 227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 91.8;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽P
                                                                                                                                                                 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 2760;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -GAAGAATGTGGCA
                                                                                                                                                                                                                                                                                                                                                         protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           849
```

2002EP-00007401

```
The invention discloses a polynucleotide comprising a sequence selected crom 1970 fully defined nucleotide sequences which encode novel complypeptides. Also claimed is a polypeptide encoded by the polynucleotide or its partial peptide, an antibody binding to the polypeptide or peptide of the polynucleotide, immunologically assaying the polypeptide or peptide competitive of the polynucleotide by contacting the polypeptide or peptide competitive between the two, a transformant carrying the polynucleotide in an competitive is useful as a primer for synthesising the polynucleotide or described in a primer for synthesising the polynucleotide or detecting the polynucleotide. The oligonucleotide competed as a primer for synthesising the polynucleotide, or as a probe for detecting the polynucleotide. The polynucleotide or detecting the polynucleotide and encoded competents are useful as pharmaceutical agents and many disease-related competents are involved in tissue and/or cell confidence for regulation of their expression and activity, or as targets competed in them, for developing a diagnostic marker or competed in the competent of the condition and activity, or as targets competed in the competent of the condition and activity, or as targets competed in the competent of the condition and activity, or as targets encoding them can be used as indicators for diseases (e.g. osteoporosis, neurological diseases, cancer, tumours. The cDNA may be used to regulate the activity or expression of the encoded protein to treat diseases. The condition is a cDNA of the invention. Note: Some of the sequence data for this patent is not represented in the printed specification, but is based on sequence information supplied by the European Patent Office.
                                                                              밁
                                                                                                                                                                                                 γQ
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                     γ
뭆
                                  S
                                                                                                                   Ş
                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yamamoto J, Isono Y,
Seki N, Yoshikawa T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-NOV-2001;
25-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page; 222pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        as targets of gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polynucleotides and polypeptides, useful for developing a diagnostic ker or medicines for regulation of their expression and activity, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2003-450961/43.
                                                                                                                                                                                                          910
                                                                                                                                                                                                                                                                                                                                      710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HELIX RES INST
                                                                                                                                                                                                                                                                                            AACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           3078 BP; 1159 A; 516 C;
                                       AAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTATA 1089
                                                                                                                                                                                                          ААССАТТІТІСАСААЛАТСАСАТТІССВАЛАСАСАТАТТСТАТСАСАТТСССВАЛАЛАЛАС 969
                                                                                                                                                                                                                                                     AACATAAGATAATTCATACTGGAGAAAAACCCTACAAATGT
                                                                                                                                                                                                                                                                                                                                      AGTATTCTTACAAATGTGAAGAATGTGGTAAAGCCTTTAACTGGTCCTCAACCCTTACTA
                                                                                                                                                                                                                                                                                                                                                                        AGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGCAAATCATTTTGCATGCTTTCACAATTAACTCAACATAAGAAAATTCATACTAGAG
                                                                                                                         CATTCCATTGTTCAGTGTGTGTAAAGGGGGTTAATTCTCGACAACACTTGAAAAGACATG 1029
                                                                                                                                                                   AAGCTTTTAACCGGTCCTCAAATCTTACTAAACATAAAATAATTCATACTGGAGAGAAAC
  AAAGAATTCATACAGAAGAGAAACCCTACAAATGTGAAGAATGTGGCAAGGCCTTTAACC 1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sugiyama T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASSOC BIOTECHNOLOGY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001JP-00379298.
2002US-00350978.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Otsuka M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hio Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Otsuki T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 1.78
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 91.8;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T, Wakamatsu A, Sa
Otsuka K, Nagai K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       538 G; 865 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nagahari K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8; DB 9;
1.7e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         227; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Masuho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sato H, I
K, Irie R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 3078;
                                                                                                                                                                                                                                                          GAAGAATGTGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ishii S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tamechika
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                   909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  789
                                                                                                                                                                                                                                                                                                                                                                                 849
                                                                                                                                                                                                                                                          823
                                                                                                                                                                         883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Į,
```

```
AADSSSSAC
AADSSSAC
ACC AADSS
ACC AACC
AADSS
ACC AADSS
ACC AADSS
ACC AADSS
ACC AADSS
ACC AADSS
ACC AACC
AADSS
ACC AACC
ACC ACC
ACC AACC
ACC ACC
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-JUL-2001; 2001US-0305089P.
12-JUL-2001; 2001US-0305104P.
13-JUL-2001; 2001US-0305325P.
13-JUL-2001; 2001US-0305390P.
19-JUL-2001; 2001US-030650P.
20-JUL-2001; 2001US-0306694P.
27-JUL-2001; 2001US-03068170P.
                                                                                                                                                                                                                                                                                                                                                                                      Ramkumar J,
Burford N, I
Barroso I, I
Arvizu CS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               developmental disorder; antiinflammatory; neuroprotective; thyromimetic; Cushing's syndrome; infection; gene therapy; cytostatic; anticonvulsant; cerebroprotective; hypothyroidism; cell proliferative disorder; allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human nucleic acid associated protein (NAAP)-34 cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAD55863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-JUL-2002; 2002WO-US021971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; nucleic acid associated protein; NAAP; stroke; AIDS; no cancer; atherosclerosis; neurological; epilepsy; Huntington's
                                                                                                                                                                                                                                                                                                    WPI; 2003-221732/21.
P-PSDB; AAE37047.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Swarnakar A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yue H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baughn MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGAATGTGGCAAAGCCTTTAGAGTATTCTCAATTCTTAAAAACATAAGATAATCCATA 1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGTTCTCGATTCTTAATAAACATAAGAGAATTCATATGGAAGATAAACCCTACAAATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACATCAATCTTT---AAGACATCATATATTATCTGTTCATGAAAAAACATTAACGTGTA 1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGTGGATCTCC 1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               даслатутавтаваятттсастсвассттсававттавсасасвасатаваттававсатс
                                                                                                                                                                                                                                                                                                                                                                                                             , Richardson TW, Warren BA, (
ghn MR, Emerling BM, Lal PG,
Li JX, Becha SD, Duggan BM,
Elliott VS, Ison CH, Ding L,
Tran B, Walia NK, Hafalia AJJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
126. .1973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product= "Human NAAP protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA; 2026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВP
                                                                                                                                                                                                                                                                                                                                                                                                                     L AJA,
                                                                                                                                                                                                                                                                                                                                                                                                                   Griffin JA, Tang YJ,
Lu DAM, Forsythe JM,
Sanjanwala MM, Le
Li, Borowsky ML, Yao
AJA, Nguyen DB, Lu J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AIDS; nootropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1206
```

The invention relates to human nucleic acid associated proteins and their corresponding nucleic acid sequences. The invention in diagnosing, treating and preventing diseases or conditions a

Claim 5; Page

259-260; 260pp; English.

New human nucleic acid associated proteins (NAAP), useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant NAAP expression e.g. cancer, AIDS, atherosclerosis, epilepsy, or

epilepsy, or

```
RESULT 13
ADA53124
ID ADA53
XX
AC ADA53
AC ADA53
XX
DT 20-N(
XX
DE Huma:
XX
EW Cyto
KW Gene
KW infl
XX
PN EP1
XX
                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                    뮰
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ŕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 258
                                                                        Cytostatic; Anti-inflammatory; Osteopathic; Neuroprotective; Nootropic; Gene Therapy; human; secretory protein; membrane proteins; cancer; inflammatory disease; osteoporosis; neurological disease; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            with the decreased expression or overexpression of NAAP, such as cell proliferative (e.g. cancer, atherosclerosis), neurological (e.g. epilepsy, Huntington's disease, stroke), immune/inflammatory (e.g. AIDS, allergies) and developmental (e.g. Hypothyroidism, Cushing's syndrome) disorders, or infections. It is also useful in assessing the effects of exogenous compounds on the expression of nucleic acid and amino acid sequences of NAAP. The NAAP or its fragments are useful in screening compounds for which acts as their agonist or antagonist. The microarray is useful in monitoring or measuring protein-protein interactions, drugtarget interactions, and gene expression profiles. NAAP DNA is used in gene therapy. The present sequence is human NAAP cDNA
                  EP1293569-A2
                                                  Homo sapiens
                                                                                                                                                                                   20-NOV-2003
                                                                                                                                                                                                                                                   ADA53124
                                                                                                                                                                                                                                                                                                                                     1476
                                                                                                                                                                                                                                                                                                                                                                                                     1416
                                                                                                                                                                                                                                                                                                                                                                                                                                    1143
                                                                                                                                                                                                                                                                                                                                                                     1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       966
                                                                                                                                                  coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              726 GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCATCACGTCCC
                                                                                                                                                                                                                                                   standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                             TGTGAAGAATGTGGCAAAGCCTTTAACCACTCCTCAAAACTTACTATACATAAGATAATT
                                                                                                                                                                                                                                                                                                                                  CATACTGGAGAGAAACCT
                                                                                                                                                                                                                                                                                                                                                                 CATCATGGTGGATCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                          тстадасстатранстаранттаран
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATGTGTCTTCACACCTTACTACACATAAGATGATTCATACTGGAGAGAAACCCCTACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATAAACAT---CAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAAACATTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           САТСАЛАТСАСССАТАСАЛАСТСАТТТАЛАТСТАСАТТТСАЛАЛАТТСТСЛАСЛАСТТТ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAGAAGCCCTTCAAATGTGAAGAATGTGGTAAAGCTTTTAACCACCCTTCAGCCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAATGTGGCAAAGCCTTCTACCATTCTTCACACCCTTACTACACATAAGGTAATTCATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATAGAAGAATTCATACTGGAGAGAAACCCTACAAATGTGAAGAATGTGGCCAAAGCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAATCTTACAAATGTGAACAATGTGGCAAAGGCTTTAACTGGTCTTCAACCCTTACAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACAAAĞÜTTTTAAÜCĞATTCTÜATACCTTACTAAACATAAGATAATTCATTCTĞGAĞAĞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             саталадсаттттсадалалтсасатттддаладсасататтдтатсасаттссдалада
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTACACATAAGTTCATTCATGTTAAAGAAAAACCCTACAAATGT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2026 BP; 699 A; 422 C; 396 G; 509 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                sequence,
                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.4%;
                                                                                                                                                  SEQ
                                                                                                                                                                                                                                                   2114
                                                                                                                                                  U
                                                                                                                                                                                                                                                                                                                                                                   1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ,
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 90.4; DB 7;
Pred. No. 2.9e-07;
                                                                                                                                                                                                                                                   ЯÐ
                                                                                                                                                  692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAAGAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1415
                                                                                                                                                                                                                                                                                                                                                                                                1475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1061
```

```
뮍
                                                                            Ş
                                                                                                       밁
                                                                                                                              Ş
                                                                                                                                                              Ъ
                                                                                                                                                                                     Ş
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2114 BP; 717 A; 439 C; 434 G; 524 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention relates to novel human secretory or membrane proteins (ADA54072-ADA55710) and their coding sequences (ADA52433-ADA54071). The coding sequences are useful in the gene therapy of diseases caused by abnormalities of the proteins, e.g. cancer, inflammatory diseases, osteoporosis or neurological disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New polynucleotides encoding full-length polypeptides, e.g. secretory and/or membrane proteins, useful for developing medicines for diseases which the gene is involved, or as target molecules for gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yamamoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Isogai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14-SEP-2001; 2001JP-00328381
24-JAN-2002; 2002US-0350435P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-MAR-2003
                         1203
 1498
                                                                                                                                                              1318
                                                                                                                                                                                                                 1258
                                                                                                                                                                                                                                                                       1198
                                                                                                                                                                                                                                                                                                                             1144
                                                                                                                                                                                                                                                                                                                                                                                 1084
                                                                                                                                                                                                                                                                                                                                                                                                                                      1024
                                                                                                                                                                                                                                            966
                                                                                                                                                                                                                                                                                                  906
                                                                                                                                                                                                                                                                                                                                                                                                            786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2003-395539/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                               726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; SEQ ID NO 692; 205pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADA54763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RES
                        CATCATGGTGGATCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HELIX RES INST
                                                                  TGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAA
                                                                                                   AATGTGTCTTCACACCTTACTACACATAAGATGATTCATACTGGAGAGAAACCCTACAAA
                                                                                                                                                                                 CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTTGTCAAGAAGCATTT
                                                                                                                                                                                                                                                                 ACTACACATAAGTTCATTCATGTTAAAGAAAAACCCCTACAAATGT-----GAAGAATGT
                                                                                                                                                                                                                                                                                                                                                                          GGAGAGAAGCCCTTCAAATGTGAAGAATGTGGTAAAGCTTTTAACCACCCTTCAGCCCTT
                                                                                                                                                                                                                                                                                                                                                                                                  AAAAAGTATATTTGCACATATGAAGGGTTGTGATAAAGCCTATAATCGACCATCATTATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCATCACGTCCC
CATACTGGAGAGAAACCT
                                                                                                                                  TATAAACAT-
                                                                                                                                                         CATAGAAGAATTCATACTGGAGAGAAACCCTACAAATGTGAAGAATGTGGCAAAGCCTTT
                                                                                                                                                                                                             AAATCTTACAAATGTGAACAATGTGGCAAAGGCTTTAACTGGTCTTCAACCCTTACAAAA
                                                                                                                                                                                                                                     GATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA
                                                                                                                                                                                                                                                                                                                                              GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                               GAATGTGGCAAAGCCTTCTACCATTCTTCACACCTTACTACACATAAGGTAATTCATACT
                                                TGTGAAGAATGTGGCAAAGCCTTTAACCACTCCTCAAAACTTACTATACATAAGATAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J, Isono Y,
Yoshikawa T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sugiyama T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ASSOC BIOTECHNOLOGY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002EP-00006586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.4%;
                                                                                                                              -CAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Otsuki T, Wakamatsu A, Sato H, I
Hio Y, Otsuka K, Nagai K, Irie R,
Otsuka M, Nagahari K, Masuho Y;
                        1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 90.4; DE Pred. No. 2.9e-0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; DB 7;
?.9e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 2114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ishii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tamechika
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                         1202
                                                                                                                                                         1377
                                                                                                                                                                                  1085
                                                                                                                                                                                                             1317
                                                                                                                                                                                                                                        1025
                                                                                                                                                                                                                                                                 1257
                                                                                                                                                                                                                                                                                            965
                                                                                                                                                                                                                                                                                                                       1197
                                                                                                                                                                                                                                                                                                                                                                          1143
                                                                                                                                                                                                                                                                                                                                                 905
                                                                                                                                                                                                                                                                                                                                                                                                                                1083
                                                                                                                                                                                                                                                                                                                                                                                                     845
                                                                                                                                                                                                                                                                                                                                                                                                                                                           785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
```

```
ADA52931

ADA52931

XX

XX

AC ADA9

S
                                               엄
                                                                                              δÃ
                                                                                                                                                   뫄
                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                            рЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Isogai T, Sugryum...
Yamamoto J, Isono Y,
ceki N, Yoshikawa T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cytostatic; Anti-inflammatory; Gene Therapy; human; secretory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADA52931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADA52931 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention relates to novel human secretory or membrane proteins (ADA54072-ADA55710) and their coding sequences (ADA52433-ADA54071). The coding sequences are useful in the gene therapy of diseases caused by abnormalities of the proteins, e.g. cancer, inflammatory diseases, osteoporosis or neurological disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New polynucleotides encoding full-length polypeptides, e.g. secretory and/or membrane proteins, useful for developing medicines for diseases which the gene is involved, or as target molecules for gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HELI-)
(REAS-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-SEP-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-MAR-2002; 2002EP-00006586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; SEQ ID NO 499;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2003-395539/38.
DB; ADA54570.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Therapy;
                                                                                                                                                        820
                                                                                                                                                                                                          068
                                                                                                                                                                                                                                                            760
                                                                                                                                                                                                                                                                                                                                                             700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                338;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HELIX RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTTTATTCAATGAGTGAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2230 BP; 831 A; 434 C; 400 G; 565 T; 0 U; 0 Other;
     ACAACACTTGAAAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAA 1069
                                                                                                                                                                                                                                                                                                           TCGACCATCATTATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATG
                                                                                                                                                                                                                                                                                                                                                                                                            ттсттсатсасстсссааааастататттссасататсаасстстсатааассстатаа
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACATTTCAGATGTAAAGAATGTGACAAATCACTTTGCATGCTTTCACGCCTAACTCAACA
                                                       AATTCGTACTGGAGAAAAACCCTATAAATGTGCACACTGTGGCAAAGCCTTTAAACAGTC
                                                                                                                                                                                                       тасадтддасдаттдтдатааадсатттттсадалаатсасатттддаааасасататтдт
                                                                                                                                                                                                                                                            CTGGTCCACAAACCTTTCTAAACCTAAGAAAATTCATACTGGAGAAAAACCCCTACAAATG
                                                                                                                                                                                                                                                                                                                                                          TAAAAAATTCATACTAGAGAAATTTCTACAAATGTGAAGAGTGTGGAAAAAACCTTTAA
                                                                                                 ATCAÇATTCCGAAAAAAAACCATTCCATTGTTCAGTGTGTGAAAAGGGGTTAATTCTCG
                                                                                                                                                        TGAAGTA----TGTGGAAAAGCCTTTCACCAATCCTCAATCCTTACTAAACATAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002US-0350435P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001JP-00328381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BIOTECHNOLOGY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ammatory; Osteopathic; Neuroprotective; Nootropic; secretory protein; membrane proteins; cancer; osteoporosis; neurological disease: מפחם פר
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hio Y, Ot Otsuka M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      205pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Otsuki T, Wakamatsu A,
io Y, Otsuka K, Nagai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  °.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 90.2;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              499.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                suka K, Nagai K,
Nagahari K, Ması
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.2e-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     323;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Masuho Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sato H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 2230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ishii S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tamechika
                                                                                                                                                                                                                                                                                                                   889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      699
                                                                                                                                                                873
                                                                                                                                                                                                                  949
                                                                                                                                                                                                                                                                 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        in
```

```
RESULT 15
ADC58104
ID ADC58
XX Bs; 9
OX Unide
XX CN138
XX CN138
XX CN138
XX CN138
XX CN138
XX CN138
XX MPI;
DR WPI;
DR TP PolyI
PT PolyI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADC58104 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-APR-2001; 2001CN-00112739.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CN1382706-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ss; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zinc finger protein 85-54.12 cDNA SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-DEC-2003
                                                                                                                                                                                                                                             Polypeptide-zinc
                                                                                                                                                                                                                                                                                                   P-PSDB;
                                                                                                                                                                           Claim 6;
                                                                                                                                                                                                                                                                                                                                                                                                                      (BIOW-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        934
                                                                                                                                                                                                                                                                                                   2003-269470/27
DB; ADC58105.
                                                                                                                                                                                                                                                                                                                                                                          Xie
                                                                                                                                                                                                                                                                                                                                                                                                                        BIOWINDOW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGTCAAGAAGCATTTTATAAACATCAATCTTTA---AGACATCATATATTATCTGTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGAACATAAGAAAATTTACACTAGAGAGAAAGCCTACAAATGTGAAGAATGTGGCAAAGC 1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACAACATAAATTAAAACATCATGGTG-GATCTCCTGCTTATCAATGTGATCATCCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      тдалалаласатталсстсталаслатсталталастттсластсслассттслалаттасс 1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGTGGCAAGGTCTTTAAGCAGTCCCCAACCCTTACTAAACATCAGATAATTTATACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCRCACCTTACTAGACATAAGATAATTCATACTGAAGAGAAACCCTACAAATGTGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTTAAGTCATGATG 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACTTAAATGTCCTAAATGTGGTAAAGGTTGTGTGTGGGAAAAAAGGTTTATCTTCACATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTTAACCAGTTTTCAACCCCTTATTACACATAAGATAATTCATAGCAGAGAGAAACCC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GITITAAAAATTTCCAAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAGGAACCATACAAATGTGAGGAATGTGGCAAAGCTTTTAACCATCTTAACAACTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTTAATTCATACTG
                                                                                                                                                                           SEQ

    CACAAATGTGAAGAATGTGGCAGAGCTTTTAACCAGTCCGCAAAGCTCACTGAACATA

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            zinc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001CN-00112739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first
                                                                                                                                                                           ID NO 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      173. .1651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           location/Qualifiers
                                                                                                                                                                                                                                                finger
                                                                                                                                                                                                                                                                                                                                                                                                                           GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA; 1952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein; cancer;
                                                                                                                                                                           33pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                           DEV INC
                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "zinc
                                                                                                                                                                                                                                                                                                                                                                                                                             SHANGHAI
                                                                                                                                                                                                                                                     85-54.12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ID NO:1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 haemopathy; HIV; immune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein 85-54.12"
                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                     polynucleotide
                                                                                                                                                                                                                                                       coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1245
```

The invention relates to a novel zinc finger protein 85-54.12. The polynucleotide encoding the zinc finger protein, the application of the protein in treating diseases such as cancer, haemopathy, HIV infection and immune disease, the antagonist of the polypeptide and its medical action, and the application of the polynucleotide are also disclosed. The present sequence encodes the zinc finger protein of the invention.

```
5
     밁
                          Ş
                                                            Дb
                                                                                                           뫄
                                                                                                                                       Ş
                                                                                                                                                                      뮍
                                                                                                                                                                                              Ϋ́
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                              Д
                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                             뮍
                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SS X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 4.4%; Score 90; DB 9; Length 1952; Best Local Similarity 52.8%; Pred. No. 3.4e-07; Matches 267; Conservative 0; Mismatches 230; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1952 BP; 760 A; 386 C; 321 G; 485 T; 0 U; 0 Other;
                              1187
                                                                                     1129
                                                                                                                                             1070
                                                                                                                                                                                    1010 ACPACACTTGAAAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAA 1069
    943
                                                            883
                                                                                                                   823
                                                                                                                                                                763 GTCÁCACATTÁCAACÁCÁTACÁATAATTCÁTÁCTGGAGAGAATCCCTACÁAÁCGÁGÁGÁ
                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                               649 T-----GAAGAATGTGGCAAAGCCTGTAACCAGTTCACAAACCTTACTACACATAAGAT
                                                                                                                                                                                                                                                                                                                  890
                                                                                                                                                                                                                                            830
                                                                                                                                                                                                                                                                                                                                                                                                     529
                                                                                                                                                                                                                                                                                                                                                                                                                                 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                             469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         710 ACTITATTCAATGAGTGAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTC 769
CAGACATAAGATAATTCATACTGGAG 968
                   ACAACATAAATTAAAACATCATGGTG 1212
                                                                      AAAAAACATTAACG--TGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGC 1186
                                                                                                                                   TIGICAAGAAGCATTITAT-AAACATCAATCTTTAAGACATCATATATTATCTGTTCATG 1128
                                                   AGAGAAACTCAATGAATATAAGGAATGTGGGCAAAGCTTTCAACCAGTCCCCACACCTTAC
                                                                                                          ATGTGÁCAAAGCCTTTAATCAGTCCTCAACCCTTACTACACATAAGATAATTCATACCAG 882
                                                                                                                                                                                                                       AATTTÄTACTAGAGACAAACTCTACAAACGTGAAGAATGTAGCAAAGCCTTTAACCTGTC 762
                                                                                                                                                                                                                                                                                                                                                                                           TAAAATAATTTGTACTAGAGTAAATTTCTACAAATGTGAAGACTGTGGAAAAGCCTTTAA 588
                                                                                                                                                                                                                                                                                                       TACAGTGGACGATTGTGATAAAGCATTTTTCAGAAAATCACATTTTGGAAAACACATATTGT
                                                                                                                                                                                                                                                                                                                                      TGGATCCTCAATCTTTACTAAACATAAAAGAATTCATATTGGAGAGAAATCGTACATATG
                                                                                                                                                                                                                                                                                                                                                               TCGACCATCATTAGAGCAACATTTAAGAACCCAACAGTAATGATCGACCGTATAAATG
                                                                                                                                                                                                                                                                                                                                                                                                               TTCTTCATCACGTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAA 829
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTTTTAAATATAAAGAATTTGGCAAATCATTTTGCATATTTTCAAACCTAACTCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                   822
                                                     942
                                                                                                                                                                                                                                                                                 702
                                                                                                                                                                                                                                                                                                          949
                                                                                                                                                                                                                                                                                                                                      648
                                                                                                                                                                                                                                                                                                                                                                  889
                                                                                                                                                                                                                                                                                                                                                                                                                                                    528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           u
```

Search completed: July 28, 2004, 15:04:04 Job time: 828 secs

This Page Blank (uspto)

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                             Minimum DB
Maximum DB
                                                                                                                                                                                                                             Database
                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                             OM nucleic
                                                                                                                                                                                                                                                                                                                                                   Run on:
                                                                                                                                                                                                                                                           seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                         nucleic search, using sw model
   July 28, 2004, 12:51:57; Search time 8116 Seconds (without alignments) 11001.312 Million cell updates/sec
                                                                                                                                                                                                                                                                                     3470272 seqs, 21671516995 residues
                                                                                                                                                                                                                                                                                                IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                 US-09-831-804-1
2060
1 ctttattaggaag:
                                                                                                                                                                                                                                                                                                              ctttattaggaagattggct.....gacatattactctcttaatg 2060
                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                           6940544
```

Pred. No. بر ت the number of results predicted by chance to have

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

45	. 4	, # • (7.4	4 ¢	7 4	م <u>د</u>	ى ر ە ە	٠ د	1 C		3 14	10		c 31		29	28	27) V	C O K		2 8	c 21	N	19	c 18	щ	16	_	c 14		. ⊢	٠,	<u>م</u> وا	c	0		5		(.)		L	Result
	٠.	2 4	, T	7.	21.	, , ,	91.0	2 4	2	94.	9 4	93.	93.	93.	93.	93	9 1	9 4	04.	0 4	2	95	96	96	96	97	97	و و	98	9 1	ט ט ט ט	999	10	10	19	199.	217.	217.	217.	1235.	123	N	Score
4.5	4.5	٠					4.		η .	, _U	ı ů	Ġ	4.5	5	·		ь. лі	л о	٠.	n o	•	4.6	4.7	4.7	4.7	4.7	4.7			4 4	٠	•		٠	•	9.7	0	0		•	0	100.0	Que Mat
174994	1.1	3078	3078	2976	2009	0110	2110	T8/0	Ų	158430	4		9	9	43	87	9 0	2007	ا د	186233	98					1599	553	1203	$\frac{3}{3}$	169500	0 1	2132	N)	690	79	21	49	1739	9	23	23	060	ength
9	9	v	6	9	9	ی د	6	۷.	o vo	N	w	9	10	N	9	1;	_					9	10	9	9	9	φ	ω (0 1	s u	ש כ	ο	ø	9	11	œ (ж Э	ω .	ω.	σ,	σ	o ¦	DB
AC022145	BC040594	AK091618	AX747097	1.1	M8 C	3669	4,	44	٠.	' Н		07		–	626	HIMSWS1269	CONTRACTO	ACLUS677	AC024483	AC092329	HSHZF9	M27879	₩.	HSU35376	AR270491	AC011494	AC008739	D70831	AKINOSO	AC099500	AK056088	AX714042	AC073544	AC138126	CNS06ING	P02	YSCP9677	YSCIFIIA	NOFF	X48919	274		ID
2145 Homo	0594 Homo	AK091618 Homo sapi	747097 Sequence	36439 Homo	875 Homo sap	669 H	7 4 8253 Seque	sap	010620 Homo sap	12431 Homo	16628 Homo sap	73210 Homo sap	24426 Mus	AC141066 Homo sapi	TIDILITIES	18281 PARSE 3	5422 Human Krue	0567	483 Homo	92329 Homo sap	932 H.sap	9 Homo sap	X000432 Mouse D	376 Hu	70491 Sequence	11494 Homo	1739 Homo gan	HOMO	3469 Homo sap	9500 Homo	56088 Homo sap	714042 Segue	3544	126 Homo	0 FIGH 77 0 17 0 17 0 17 0 17 0 17 0 17 0 17	A S Cerevisi	ESA1 Saccuaromy	M80611 caccharomic	1638 Sagharance	9193 CAMULUA	70777	יייייייייייייייייייייייייייייייייייייי	Description

ALIGNMENTS

AUTHORS TITLE	Danadance	ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION		DEFINITION	LOCUS	BD274349	RESULT 1
rallier,F.B., Camier,S. and Sentenac,A. Candida albicans tfIIIAgene (CatfIIIA) and the coded CATFIIA	Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; mitosporic Saccharomycetales; Candida.	Candida albicans	Candida albicans	JP 2002531068-A/1.	BD274349.1 GI:33084117	BD274349	protein.	IIIA) and the code	BD274349 2060 bp DNA linear PAT 17-HH:-2003		

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
             S
                                      밁
                                                            Ş
                                                                                         Ъ
                                                                                                                δÃ
                                                                                                                                           밁
                                                                                                                                                              20
                                                                                                                                                                                        Дb
                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                  8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 2060, Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent: JP 2002531068-A 1 24-SEP-2002;
AVENTIS PHARMA SA
OS Candida albicans
PN JP 2002531068-A/1
PD 24-SEP-2002
PF 09-NOV-1998 JP 2000581204
PR 10-NOV-1998 FR 98/14147
PI FLORENCE BORDON PALLIER, SYLVIE CAMIER, ANDRE SENTENAC PC C12N15/09, C12N1/21, C12P21/02, C12Q1/02, G01N33/15, G01N33/50, PC C12N1/19, C12N1/21, C12P21/02, C12Q1/02, G01N33/15, G01N33/50, PC G01N33/56, G01N33/569//(C12N15/09, C12R1:725), C12N15/00, C12R1:725)
PC G01N33/566, G01N33/569//(C12N15/09, C12R1:725), C12N15/00, C12R1:725)
PC C12N15/00, C12R1:725)
PC C2N1015/00, C12R1:725
PC C3N10164 albicans tfIIIAgene (CatfIIIA) and the coded CATFIII CCC
PT Key Location/Qualifiers
FT SOURCE /organism='Candida albicans'.
                                                                                                                    481
                                                                                                                                              421
                                                                                                                                                                        421
                                                                                                                                                                                                 361
                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                           481
                                         541
                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                      ACAAAAGGAAAAGTGAATTGAACTAGATCAGTAGTGGTCTGGACCCTCTATAATTTTATAA
                                                                                                                                                                                                                                                                                                                                                                               AAATAGGCGCAGGCCTCCGAATCCCCAAAAAAAGAATCAGGATGTCTCGGCTGCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAGTAAATATCCAATCATTGGGCTTCAGTGTGAATGGGGGTTGTCAATCTCTTGGTGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAGTAAATATCCAATCATTGGGCTTCAGTGTGAATGGGGGTTGTCAATCTCTTGGTGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTTATTAGGAAGATTGGCTAGGCCATTTTGTATTACGGGTCTCCAAAGTGCAATTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTTATTAGGAAGATTGGCTAGGCCATTTTGTATTACGGGTCTCCAAAGTGCAATTGTTT
                                                                                                                                              GACTTTGCTCACTTCATAGAGTGCCGACTTGATTATTATTGAGCTTTATCCTCTGTAATA
                                                                                                                                                            GACTTTGCTCACTTCATAGAGTGCCGACTTGATTATTATTGAGCTTTATCCTCTGTAATA
                                                                                                                                                                                                  GGACATCTCGTTCCCCTTGTGAAGGGTCGTCTGTAATGAATTCATGATCAAGAATAATAT
                                                                                                                                                                                                                TATTGTCACGGGCTTTAGAATTTGTATAATTGTGTGTGTCTGACACTCTGTGGGTTAATATCT
                                                                                                                                                                                                                                                                                                                     ACAAAAGGAAAAGTGATTGAACTAGATCAGTAGTGGTCTGGACCCTCTATAATTTTATAA
                                                                                                                                                                                                                                                                                                                                                            AAATAGGCGCAGGCCTCCGAATCCCAAAAAAAAGAAGAATCAGGATGTCTCGGCTGCAAGA
CAAATGTAATTGGTACAATCCTTTTTGTCCTTGTCGCGACTTCCTTTAATATCGCGACTT
                                                                                                          TATCGTAACCACTTGACTTATTTCCTTGTGTGGGATTCACTTTGGATGATGATGATGTTAAC
                                                                                                                                                                                                                                                     TATTGTCACGGGCTTTAGAATTTGTATAATTGTGTGTCTGACACTCTGTGGTTAATATCT
                                         CARATGIAATTGGTACAATCCTTTTTGTCCTTGTCGCGACTTCCTTTAATATCGCGACTT
                                                                                             TATCGTAACCACTTGACTTATTTCCTTGTTGTGGGATTCACTTTGGATGATGATGTTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G01N33/566,G01N33/569//(C12N15/09,C12R1:725),C12N15/00,C12N15/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C12N1/19, C12N1/21, C12P21/02, C12Q1/02, G01N33/15, G01N33/50,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 2060; ilarity 100.0%; Pred. No. 0; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism=/Candida
Location/Qualifiers
1...2060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Candida albicans"
/mol_type="genomic DNA"
/db_xref="taxon:5476"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           coded CATFIIIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PC
                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                  480
                                                                                                                                                                            480
                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                        240
                   660
                                             600
                                                                       600
                                                                                                 540
                                                                                                                        540
                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Дb
                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                          5
                        δÃ
                                                      DЬ
                                                                            5
                                                                                                             뫄
                                                                                                                            5
                                                                                                                                                         A 45
                                                                                                                                                                                                          뮹
                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                    g
         뎡
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1021
                                                                                                                                                                                                                                                                       1381
                                                                                                                                                                                                                                                                                                                                                   1321
                                                                                                                                                                                                                                                                                                                                                                                                       1261
                                                                                                                                                                                                                                                                                                                                                                                                                                1201
                                                                                                                                                                                                                     1441
                                                                                                                                                                                                                                              1441
                                                                                                                                                                                                                                                                                                                           1321
         1681
                                                            1621
                                                                                      1621
                                                                                                              1561
                                                                                                                                       1561
                                                                                                                                                                                           1501
                                                                                                                                                                                                                                                                                                 1381
                                  1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        reaereaaaereaeceaaaeceaaareeararearerraararerrerrerrerreareae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGAGTGAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCTTCATCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAAATAAACAGCGGACCTCATCTCTTTTTTCAAATCCACTTTTTATTACTTTATTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAAAAACCATTCCATTGTTCAGTGTGTAAAGGGGGTTAATTCTCGACAACACTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTGTGATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAAACCATTCCATTGTTCAGTGTGTGTAAAGGGGGTTAATTCTCCGACAACACTTGA
                                                                                                                                                                                                                                                                                                                                        AATGTGGTAAAGGTTGTTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCATGATG 1380
                                                                                                                                                                                                                                                                                                                                                                            AAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAAATGTCCTA
                                                                                                                                                                                                                                                                                                                                                                                          AAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAATGTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                               AACATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTTAAAAATTTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                              AACATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTAAAAATTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGTGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAATTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATTTTATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAG
                                                                                                                                                                                TAAAGGAAACTGAAGTGAAAAATTAGAGAACCTATTAGATCAAGGATCGAAATTAAATA
                                                                                                                                                                                                                    AAAATGAATTAGTTGAACATTATAATATCTTCCATGATGGTAATATCCCTGATGATTAT
                                                                                                                                                                                                                                    AAAATGAATTAGTTGAACATTATAATATCTTCCATGATGGTAATATCCCTGATGATTAT
                                                                                                                                                                                                                                                                       ATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGGGGGGAAATTTGCAAAGA
                                                                                                                                                                                                                                                                                       ATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGATGTGGGGGAAATTTTGCAAAGA
                                                                                                                                                                                                                                                                                                                           <u>AATGTGGTAAAGGTTGTGTTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCATGATG</u>
         TAAAATCATTTACTGCTTCTTTGGAAGGTTCAAAGAGTTTTCTAAACTTATTCTGAATA
                       TAAAATCATTTACTGCTTCTTTCGAAGGTTTCAAAGAGTTTTCTAAACTTATTCTGAATA
                                                                                                             TAAAGGAAACTGAAGTGAAAAATTAGAGAACCTATTAGATCAAGGATCGAAATTAAATA
                                                          ATAGTCTAGATGAAAAAAGAAGTGATGTTAGATCAGACTCAATGTCAGCTCAAAGATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                 1560
                                                                                                                                                                                                                                                                             1440
                                                                                                                                                                                                                                                                                                                                 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                       1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           840
                                       1740
                                                                 1680
                                                                                           1680
                                                                                                                     1620
                                                                                                                                              1620
                                                                                                                                                                         1560
                                                                                                                                                                                                                                                     1500
               1740
```

CTTCATCA 779	Query Match 60.1%; Score 1239; DB 6; Length 1239; Best Local Similarity 100.0%; Pred. No. 2.6e-187; Matches 1239; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	/organism="Candida albicans" /mol_type="genomic DNA" /db_xref="taxon:5476"	cation/(PC (C12N15/00,C12R1:725) CC Candida albicans tfillAgene (CatfillA) and the coded CATFILLA CC protein	PC C12N1/19,C12N1/21,C12P21/02,C12Q1/02,G01N33/15,G01N33/50, PC G01N33/53, PC G01N33/56,G01N33/569/(C12N15/09,C12R1:725),C12N15/09,C12N15/09,C12N15/09,C12N15/09,C12N15/09,C12N15/09,C12N15/09,C12N15/09,C12N15/09,C12N15/09	PR 10-NOV-1998 PR 98/14147 PR 10-NOV-1998 PR 98/14147 PI FLORENCE BORDON PALLIER, SYLVIE CAMIER, ANDRE SENTENAC PC C12N15/09, C12N15/09, A61K39/00, A61K45/00, A61P31/10, C07K14/40, PC C07K16/14	COMMENT OS Candida albicans PN JP 2002531068-A/2 PD 24-SEP-2002	AUTHORS Pallier, F.B., Camier, S. and Sentenac, A. TITLE Candida albicans tfIIIAgene (CatfIIIA) and the coded CATFIIIA JOURNAL Patent: JP 2002531068-A 2 24-SEP-2002; AUTHORS PALMA CA	ORGANISM Candida albicans Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; mitosporic Saccharomycetales; Candida. REFERENCE 1 (hases 1 to 1220)	ACCESSION DD274350 VERSION BD274350.1 GI:33084118 KEYWORDS JP 2002531068-A)/2. SOURCE Candida alticano	BD274350 BD274350 LOCUS BD274350 BD274350 Candida albicans tfIIIAgene (CatfIIIA) and the coded CATFIIIA DEFINITION Candida albicans tfIIIAgene (CatfIIIA)	Db 2041 GACATATTACTCTCTTAATG 2060	Db 1981 CATITITATTTCTTTAATTTTTTTTTTTTTTTTTTTTTT	Db 1921 ĀTTTATTGCCĀĀĀTGĀĀĀCĀTCĀGTGĀTTCTCGĀTĀĀTĀTĀTĀTĀ	Db 1861 ÁTAGTÁTÁGÁAÁAÁAGÁAGÁAGÁAGÁTGAAGGTGAACCATTGGTTAAAAAAAGCCAGGATGG 1920 QY 1921 ATTTATTGCCAAATGAAACATCAGTGATTTCTCGATAATATACATTTAAAATATTATTAA 1980	QY 1861 ATRIAGRICGACATTIGAAARGGCATGATAATTTACAAAGAATTGAGTCATTCTTAA 1860 QY 1861 ATRITATAGAAAAAGAAAGAAACTCCAGAAGGTGAACCATTGGTTAAAAAAGCCAGGATGG 1920	1801	Db 1741 GTGGGAAGAACAATTGTCCTAAGAATAATTGTGATAGAATGTTTTCTAGAGAATATATG 1800
Oy Db	Qy dd	Q dd	אס מם	Qу	Qy	Qy Db	Qy Db	עץ עס	Qy Db	Qy Db	Qy Db	Qy Db	Qγ	9 4g	D Dy	ob ?	OV Db	Qy
1800 GATTTACGTCGACATTTGAAATGGCATGATGATAATTTACAAAGAATTGAGTCATTCTTA 1859 	1740 AGTGGGAAGAAGATCAATTGTCCTAAGAATAATTGTGATAGAATGTTTTCTAGAGAATAT 1799 	1680 ATAAAATCATTTACTGCTTCTTTGGAAGGTTCAAAGAGTGTTTCTAAACTTATTCTGAAT 1739 	1620 GATAGTCTAGATGAAAAAAGAAGTGATGTTAGATCAAGACTCAATGTCAGCTGAAAGATCA 1679 	1560 AATTTGCATGAATTAGAAACAGAGAAATTAAAAGTGGAAGAAGATGAAGAAGATGAAGAA	81	1440 AAAAATGAATTAGTTGAACATTATAATATCTTCCATGATGGTAATATCCCTGATGATTTA 1499 	1380 GATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGATGTGGGGAAATTTTGCAAAG 1439 	1320 AAATGTGGTAAAGGTTGTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCATGAT 1379 	1260 CAAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAATGTCCT 1319 	1200 ADACATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTC 1259	1140 ACGTGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTA 1199 	1080 GCATTTTATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAAAA	1020 AAAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAA 1079 	960 GAAAAAAACCATTCCATTGTTCAGTCTGGTGAAAGGGGTTAATTCTCGACAACACTTG 1019 	900 GATTGTGATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCC 959	121 TTATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGAC 180	, ,,	780 CGTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCA 839

1319

1379 600

```
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 3
AX489193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                                                                                                                                                                                                                                                                            Ϋ́
                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                               8
                                                                Вb
                                                                                           γŞ
                                                                                                                    g
                                                                                                                                                       8
                                                                                                                                                                                        밁
                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 1237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1860
                                                                                                                                                                                                                      1020
                                     1200
                                                                                                                               361
                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                           900
                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 780
                                                                   421
         481
                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX489193
Sequence
AX489193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Koemer,T., Jiang,B., Boone,C., Bussey,H. and Ohlsen,K.L. Gene disruption methodologies for drug target discovery Patent: WO 02053728-A 6493 11-JUL-2002; Elitra Pharmaceuticals, Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Candida albicans
Candida albicans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Fungi; Ascomycota;
Saccharomycetales; mitosporic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX489193.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTTATTGCCAAATGAAACATCAGTGATTTCTCGATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATAGTATAGAAAAAGAAGAAACTCCAGAAGGTGAACCATTGGTTAAAAAAGCCAGGATG
                                                                                                                                                                                                                                                                    GAAAAAAAACCATTCCATTGTTCAGTGTGTGGGTAAAGGGGTTAATTCTCGACAACACTTG 1019
                                                                                                                                                                                                                                                                                                                                   GATTGTGATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGAGTGAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCTTCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATTTATTGCCAAATGAAACATCAGTGATTTCTCGATAA
                                                                                                                                                                                                                                                                                                                GATTGTGATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCC
                                                                                                                                                                                                                                                                                                                                                                                                    TTATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                     CGTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGAGTGAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCATCA
                                                                                                                                                 GCATTTATAAACATCAATCTTAAGACATCATATATTATCTGTTCATGAAAAAACATTA 1139
                                                                                                                                                                                                              AAAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAAATTGTCAAGAA 1079
                                                                                                                                                                                                                                                      GAAAAAAAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGGTTAATTCTCGACAACACTTG
                                                                                                                                                                                                                                                                                                                                                                          TTATTGGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGAG
                         AAACATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTC
                                                                                   ACGIGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTA 1199
                                                                                                                               GCATTTTATAAACATCAATCTTTAAGACATCATATTATCTGTTCATGAAAAAACATTA
                                                                                                                                                                                           AAAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Candida albicans"
/mol_type="unassigned DNA"
/db_xref="taxon:5476"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:22323205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60.0%;
99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1239 bp DNA
Patent W002053728.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1235.8; DB 6;
Pred. No. 8.2e-187;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Saccharomycetina; Saccharomycetes; Saccharomycetales; Candida.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 16-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1200
                                                                                                                                                                                                                                                                                                                                                                                                            899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      839
                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  779
                                          1259
                                                                                                                                    420
                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                959
              540
                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                     RESULT 4
YSCNOFEAT
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                            COMMENT
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                       DEFINITION
                                                        MEDLINE
                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                              ORGANISM
                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1560
                                                                                                                                                                                                                                                                                                                                                                                               1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                         YSCNOFRAT 1560 bp DNA linear PLN 27-Saccharomyces cerevisiae transcription factor IIIA and RNA polymerase subunit RPB6 genes. M99638
                                                                                                                                                                             RNA polymerase; transcription factor IIIA.
Saccharomyces cerevisiae (baker's yeast)
Saccharomyces cerevisiae
Bukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Saccharomyces.
                                                                                                                    Genes encoding transcription factor IIIA and the RNA polymerase common subunit RPB6 are divergently transcribed in Saccharomyces
                                                                                                                                                    1 (bases 1 to 1560)
Woychik, N.A. and Young, R.A.
                                                                                                                                                                                                                                                          M90638.1
                                            Original
                                                                           92237295
                                                                                         Proc.
                                                                                                        cerevisiae
                                                           1570325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGGGGGAAATTTGCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAATGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTAAAGGAAACTGAAGTGAAAAAATTAGAGAACCTATTAGATCAAGGATCGAAATTAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAAATGAATTAGTTGAACATTATAATATCTTCCATGATGGTAATATCCCTGATGATTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATGTGGTAAAGGTTGTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAATGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATAAAATCATTTACTGCTTCTTTGGAAGGTTTCAAAGAGTGTTTCTAAACTTATTCTGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATAGTCTAGATGAAAAAAGAAGTGATGTTAGATCAGACTCAATGTCAGCTCAAAGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGATGTGGGGAAATTTGCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                               GATTTATTGCCAAATGAAACATCAGTGATTTCTCGATAA 1958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATTTACGTCGACATTTGAAATGGCATGATGATGATTTACAAAGAATTGAGTCATTCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTGGGAAGAAGATCAATTGTCCTAAGAATAATTGTGGATAGAATGTTTTCTAGAGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATAAAATCATTTACTGCTTCTTTGGAAGGTTCAAAGAGTGTTTCTAAACTTATTCTGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATAGTCTAGATGAAAAAAGAAGTGATGTTAGATCAGACTCAATGTCAGCTCAAAGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTAAAGGAAACTGAAGTGAAAAATTAGAGAACCTATTAGATCAAGGATCGAAATTAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>AAAAATGAATTAGTTGAACATTATAATATCTTCCATGATGGTAATATCCCTGATGATTTA</u>
                                                                                                                                                                                                                                                                                                                                                                                               GATTTATTGCCAAATGAAACATCAGTGATTTCTCGATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                         MATAGTATAGAAAAAGAAGAAACTCCAGAAGGTGAACCATTGGTTAAAAAAGCCAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATAGTATAGAAAAAGAAGAAGTCCAGAAAGGTGAACCATTGGTTAAAAAAAGCCAGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATTTACGTCGACATTTGAAATGGCATGATGATAATTTACAAAGAATTGAGTCATTCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTGGGAAGAAGATCAATTGTCCTAAGAATAATTGTGATAGAATGTTTTCTAGAGAATAT
                                                                                         Natl. Acad. Sci. U.S.A.
              Location/Qualifiers
1. .1560
                                             source text:
/organism="Saccharomyces
                                                                                                                                                                                                                                                            GI:172046
                                               Saccharomyces
                                                                                             89
                                                                                             (9), 3999-4003
                                                cerevisiae
```

1239

1859

1080

1919 1140 1739

1020

1679

900 1619 840

960

1559

1499

780

1439 660

720

27-APR-1993

(strain

S288C)

DNA.

(1992)

```
REFERENCE
AUTHORS
                                               SOURCE
ORGANISM
                                                                                             ACCESSION
VERSION
                                                                                                                                            RESULT 5
YSCTFIIIA
LOCUS
                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                        ğ
                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ϋ́
                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                ΔÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                           1375
                                                                                                                                                                                                                                                                                                                           1315
                                                                                                                                                                                                                                                                                                                                                                                                                       1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1081
                                                                                                                                                                                                                                                                                                                                                  845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             605
                                                                                                                                                                                                                                                                                                                                                                                                                                              725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     409;
        Saccharomyces cerevisiae
Eukaryota; Fungi; Ascomycota;
Saccharomycetales; Saccharomyc
1 (bases 1 to 1739)
                                                                    transcription factor IIIA; zinc-finger protein; transcription factor.
                                                                                                           complete cds
M80611
  Archambault,J.,
                                                        Saccharomyces cerevisiae
                                                                                             M80611.1 GI:172902
                                                                                                                                Saccharomyces
                                                                                                                                            YSCTFIIIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                    CTAGAAAACATGATCTTCTCACGCATTAT 1053
                                                                                                                                                                                                                                                                     ATGATGATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGATGTGGGGAAATTTG
                                                                                                                                                                                                                                                                                              GTCCTATTTGTAGCAAACCATGTGTGGGGGAAAATGGTTTACAAATGCACATGATTATTC
                                                                                                                                                                                                                                                                                                                 GTCCTAAATGTGGTAAAGGTTGTGTGTGGGAAAAAAAGGTTTATCTTCACATATGTTAAGTC
                                                                                                                                                                                                                                                                                                                                             AGTTTCGGATATGGTCACAATTGCAATCGCATATAAAAAATGATCATCCTAAATTAAAAT
                                                                                                                                                                                                                                                                                                                                                                    ATTTCCAAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                AACATCA----TGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTGTCCACACTGCAATAAAAGCTTTCAGAGGCCATATAGGCTAAGAAATCACATTTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGTGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTCTACAAGCATCCACAATTAAGGGCACATATTTTATCTGTTCATTTACATAAACTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATTTTATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAAAGAAAATGAATTAGTTGAACATTAT 1463
                                                                                                                                                                                                                                                 ATGACGACTCACTAGTAACCAAAAATTGGAAGTGTCATATATGTCCTGATATGTCTTTTT
                                                                                                                                                                                                                                                                                                                                                                                          AACATCACGATCCTGAGGTAGAAAATCCTTACCAATGTACTTTTGCTGGTTGTTGCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAG 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTGTGATAAAGCATTTTTCAGAAAATCACATTTGGAAAACACATATTGTATCACATTCCG 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCAT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATACGAAACCATTCCAATGTTCTTATTGTGGAAAAGGAGTGACGACTCGCCAGCAACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTTGACTGAACACCAATTAAGCGTACATCAGGGTTTA---AGAGCATTTCAGTGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCCAAAGACATATTTCTGTGACTATGATGGCTGTGATAAGGCATTTACAAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTGTGCAAAATCCTTTCGTTAAAAAAGAGTCACTTAGAGAGACACTTGTATACGCATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10.6%;
nilarity 59.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="genomic DN:
/strain="S288C"
/db_xref="taxon:4932"
e 14.
                                                                                                                             1739 bp DNA cerevisiae transcription
Milne, C.A.,
                     Saccharomycetaceae; Saccharomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 217.4; Di
Pred. No. 4.4e-:
0; Mismatches :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>.</u>
                                                      (baker's
Schappert, K.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA"
                                Saccharomycotina;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.4e-25;
                                                        yeast)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                271;
                                                                                                                             factor
                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
Baum, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                 Saccharomycetes;
                                                                             zinc-finger
                                                                                                                            PLN 13-SEP-1996 (TFIIIA) gene,
Friesen, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9;
                                                                                                                                                                                                                                                 1024
                                                                                                                                                                                                                                                                       1434
                                                                                                                                                                                                                                                                                                                      1374
                                                                                                                                                                                                                                                                                                                                                                     1314
                                                                                                                                                                                                                                                                                                                                                                                                                   1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1140
                                                                                                                                                                                                                                                                                               964
                                                                                                                                                                                                                                                                                                                                                                                             844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1020
                                                                                                                                                                                                                                                                                                                                              904
                                                                                                                                                                                                                                                                                                                                                                                                                                           784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  427
        밁
                          5
                                                    B
                                                                         8
                                                                                                   뮍
                                                                                                                       8
                                                                                                                                                 밁
                                                                                                                                                                     Ş
                                                                                                                                                                                                 맑
                                                                                                                                                                                                                   50
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                           1201
                                                                                                                          1141
                                                                                                                                                                         1081
                                                                                                                                                                                                                       1021
       844
                                                     784
                                                                                                   724
                                                                                                                                                 664
                                                                                                                                                                                                 604
                                                                                                                                                                                                                                               544
                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                             484
                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                            427
                                                                                                                                                                                                                                                                                                                                                                                          367
                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                        409;
```

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J. B101.
92147684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TFIIIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Saccharomyces
                                                                   ATTTCCAAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTCTACAAGCATCCACAATTAAGGGCACATATTTTATCTGTTCATTTACATAAACTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAAAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGA 1020
AGTTTCGGATATGGTCACAATTGCAATCGCATATAAAAAATGATCATCCTAAATTAAAAT
                                                                                                                                                                                                                                                                                                       CCTGTCCACACTGCAATAAAAGCTTTCAGAGGCCATATAGGCTAAGAAATCACATTTCTA
                                                                                                                                                                                                                                                                                                                                                                           ССТСТАААСААТСТААТАААСТТТТСАСТССАССТТСААААТТАССАСАСАТАААТТАА
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       АААGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTGTGATAAAGCATTTTTCAGAAAATCACATTTTGGAAACACATATTGTATCACATTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTTGACTGAACACCAATTAAGCGTACATCAGGGTTTA---AGAGCATTTCAGTGTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACG
                                                                                                                                               AACATCACGATCCTGAGGTAGAAAATCCTTACCAATGTACTTTTGCTGGTTGTTGCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATACGAAACCATTCCAATGTTCTTATTGTGGAAAAGGAGTGACGACTCGCCAGCAACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTGTGCAAAATCCTTCGTTAAAAAGAGTCACTTAGAGAGACACTTGTATACGCATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCAAAGACATATTTCTGTGACTATGATGGCTGTGATAAGGCATTTACAAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCCCAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCAT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Biol. Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Segall,J. deduced sequence of the transcription factor TFIIIA from charomyces cerevisiae reveals extensive divergence from X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product="transcription factor IIIA"
/protein_id="AAB08014.1"
/db_xref="GI:172903"
/translation="MGGEVLNNEGMPLAELKQETIPISRSESSESLNSLTSTRSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSESSESLNSLTSTRSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSESSESLNSLTSTRSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSESSESLNSLTSTRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSESSESLNSLTSTRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSESSESLNSLTSTRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSN
/translation="MGGEVLNNEGMPLAELKQETIPISRSSSN
/translation="MGGEVLNNegmplaelkqetipisrs"
/translation="MGGEVLNNegmplaelkq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Saccharomyces
/mol_type="genomic DNA"
/strain="W303-1A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="zinc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene="TFIIIA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene="TFIIA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 chromosome="XVI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                db_xref="taxon:4932"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10.6%;
                                                                                                                                                                                               -TGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAA 1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (5),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 217.4; | Pred. No. 4.4e.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             finger containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3282-3288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.4e-25;
ches 271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cerevisiae"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xenopus
                                                                       1314
                                                                                                                                                                                                                                                                                                                                                                           1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                               843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               663
                                                                                                                                                                                                                                                                                                       783
                                                                                                                                                                                                                                                                                                                                                                                                                                                       723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N
```

```
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YSCP9677/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37497 bp 1
Saccharomyces cerevisiae chromosome
U25841 U00094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Johnston, M., Andrews, S., Brinkman, R., Cooper, J., Ding, H., Du, Z., Favello, A., Fulton, L., Gattung, S., Greco, T., Kirsten, J., Kucaba, J. Hallsworth, K., Hawkins, J., Hillier, L., Jier, M., Johnson, D., Johnston, L., Langston, Y., Latreille, P., Le, T., Mardis, E., Menezes, S., Miller, N., Nhan, M., Pauley, A., Peluso, D., Rifken, L., Riles, L., Taich, A., Trevaskis, E., Vignati, D., Wilcox, L., Wohldman, P., Vaudin, M., Wilson, R. and Waterston, R.

The sequence of a portion of the right arm of Saccharomyces cerevisiae chromosome XVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Saccharomycetales; Sa
1 (bases 1 to 37497)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; Saccharomycetaceae; Saccharomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Saccharomyces cerevisiae (baker's yeast)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U25841.1 GI:786295
                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence cosmid on the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission Submitted (27-APR-1995) Robert Waterston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 (bases 1 to 37497) Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The sequence of S. cerevisiae Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NEIGHBORING COSMID INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTAGAAAACATGATCTTCTCACGCATTAT 1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAAGAAAATGAATTAGTTGAACATTAT 1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGATGATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGATGTGGGGGAAATTTG 1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCCTATTTGTAGCAAACCATGTGTGGGGGGAAAATGGTTTACAAATGCACATGATTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCCTAAATGTGGTAAAGGTTGTGTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTC 1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGACGACTCACTAGTAACCAAAAATTGGAAGTGTCATATATGTCCTGATATGTCTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 37497)
                                                                                                                                                                                                                                                                                                                                                                                                                                 equence includes nucleotides on the left is 9705.
                     /translation="MGGEVLNNEGMPLAELKQETIPISRSESSESLNSLTSTRSSSSN
RPKTYFCDYDGCDKAFTRPSILTEHQLSVHQGLRAFQCDKCAKSFVKKSHLERHLYTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       by:
Genome Sequencing Center
Genetics,
                                                                                                      number S20050)"
                                                                                                                                                                                                          complement (2366.
                                                                                                                                                                                                                                                complement (2366.
SDTKPFQCSYCGKGVTTRQQLKRHEVTHTKSF1CPEEGCNLRFYKHPQLRAHILSVHL
                                                                                                                                                                                                                                                                                                      /mol_type="genomic_DNA"
/strain="S288C (AB972)"
/db_xref="taxon:4932"
                                                             /protein_id="AAB64615.1"
/db_xref="GI:786305"
                                                                                                                         /product="Transcription factor TFIIIA (PIR accession
                                                                                                                                                               /note="P9677.9"
                                                                                                                                                                                                                           /gene="TFC2"
                                                                                                                                                                                                                                                                  /note="baker's yeast"
                                                                                                                                                                                                                                                                                                                                                                                                              location/Qualifiers
                                                                                                                                                                                   gene="TFC2"
                                                                                                                                              codon
                                                                                                                                                                                                                                                                                                                                                                        organism="Saccharomyces cerevisiae"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          St. Louis, MO 63110, USA e-mail: mj@sequencer.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Department of Genetics, Wast. Louis, MO 63110, USA
                                                                                                                                              start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Saccharomycetaceae;
                                                                                                                                                                                                          .3655)
                                                                                                                                                                                                                                                   .3655)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cosmid 9677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA linear
e XVI cosmid 9677
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1-37497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cooper,J., Ding,H., Du,Z.,
eco,T., Kirsten,J., Kucaba,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Эf
                                                                                                                                                                                                                                                                                                                                                                                                                                                         cosmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           University,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLN
                                                                                                                                                                                                                                                                                                                                                                                                                                                         9677.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-AUG-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                       The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                     gene
                                              SGD
```

```
EIDQLYNQLVNILADDOKKSE ELNQWLENFIKYLKSKEDLDVKKDE PTKVEMWEDWUL
VNHQSLLAWQKYFEWTDYEDLDNMDAPLI IKYEKKEPEDDEVEDEVKDQDEEAKI
KSLESANKPEDGKKYEKETD IKOVETINEDEVKDR VEDEVKDRVEDEVKDQDEEAKE
KSLESANKPERGEHKKTEKETD IKOVETINEDEVKDR VEDEVKDRVEDEVKDQDEEAKE
DEEEDLDDIEIGLLEEBEVVTULTENI VÇKKNNILAHRILOQYYLLIKEYERALPYI KN
GISLIAYNIKDLGVHLFLIKREFSLDLATVYTYVDAFKDHNAALKLYNNILSGDFSNI
QAKMGKGI IF IERKNWKDAMTLLTQVHEQS PNNILEVLSENSKEAHMGYNDEALAGLD
TVIKGIKGMDLRS IDEBALMURQAKYYITWKHAS INDAKQENVKCAFKLLIQSIKILD
TVIKGIKGMDLRS IDEBALMURQAKYYITKHAS INDAKQENVKCAFKLLIQSIKILD
TPAPGFSTLGDIYCHYYKDHLRAFKCYFKAFDLDAGDYTAAXYITETYAS KENWQAAS
SIASRLIKGEKAKAELRSNNWPFRVVGIAHLEKQEESDSIEMFGSALRVDDNUVESWV
GLGQAYHACGRIASIKVFDKAI QLRPSHTFAQYFKAI SLCDVGBYLESLDILEKYCQ
EAATBESFQIGLVEYLAWCSLDLYSQGFILKSVSIAFAEDSVUNIKIDTILDSTTDD
NVSIACKELILASKYSVSDQKFTDIAGTVRASKYNIGISELTAFITIKBEPQYRDAAI
FAFKKSIQLGNNTSETWIGLGIATMDINFRVSQHICIKATALBERITIKBEQYRDAAI
FAFKKSIQLGSNTSETWIGLGAATMOLNFRVSGHICIKATALBERAHGFILSNCRSK
AKQPMYAKNVLENHINGDDEKDIETVEKLTASIATLEEGGDIIGSSKLFAHGSILSNCRSK
KKKDTEFAQQVLNKLQSLAPQDSSPMLGMALILEEGGDIIGSSKLFAHGSILSNCRSK
AKQPMYAKNVLENHINGDDEKDIETVEKLTASIATLEFTKOCARA BUTU OT OTBERT OTCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HKLTCPHCNKSFQRPYRLRNHISKHHDPEVENPYQCTFAGCCKEFRIWSQLQSHIKND
HPKLKCPICSKPCVGENGLQMHNIIHDDSLVTKNWKCHICPDNSFSRKHDLTENGSI
HTEEDIPLELKYKISDIQQLVQDHGVQLGNSKHSNEQDEEKISNRLFKERKLTENNUV
EFLQNEYDLEKKLESGENGLNLLLNTVCRKYRCFYNNCSRTFKTKEKYEKHIDKHKVH
ELKLKILQEKEENKTLVDQNHKEPFIIQKETQSAGDK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Similar to calmodulins (e.g., Swiss Prot.
number P13868) and calmodulin-related proteins (e
Swiss Prot. accession number P27482) from several
organism."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /trānslation="msdyezafndgnenfedfdvehfsdeetybekepgfkdgettdan
GKTIVTGGNGFEDFQQHEQIRRKTLKEKAIFKDQRATTPYMTKYERARILGTRALQIS
MNAFVFVDLEGETDFLRIAMKELAEKKIPLVIRRYLPDGSFEDMSVEELIVDL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YDBYFDLCGQYADALLKQEQSQVELINDIKLLKKTHPDCQKAFYQHLKPGSLMAETIG
RHLSTPQDALLNLIKILSNIETTEIGKTLSQNRLKLKASDPDYQIKLNSFSWEIIKNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement (4621. .5112)
/gene="P9677.10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (4621.
/gene="P9677.10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3890. .4433
                            NADLSQGIISESSDEKSMKTKISNHICLGLSYFFLNDFDQTLNQFQELLSISKDSKHL
VVLIAKVLYDVGESDTKEIALQELTEYIATSGADLLVTLTIAAMSILDDKREDLSIIL
EELKALPLSKQIIDKHKDAPYLIEEITKRLYRNDTGKQVWQRSAYFFPNNLKVWERLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation="msdikqllkeakqeltnrdyeetieisekvlkldpdnyfahlfl
GKALSSLPASNNVSSNRNLERATNHYVSAAKLVPDNLLAWKGLFLLFRTTEVVPDILS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5297. .9595
/gene="SKI3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /translation="MDHSESLTFNQLTQDYINKLKDAFQMLDEDEDGLISRGDLTKIY
ATLGKTLTDEEWSKMVPDNDTSTAEVGEEGVSFPIFLSIMGKNLSQFPEREELEESLX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
/product="23 kD polypeptide of RNA Polymerases
III (Swiss Prot. accession number P20435)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="Contains 8 copies of the TPR domain"
/protein_id="AAB64618.1"
/db_xref="GI:786303"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AIGRGHDLNVPLNEVIDSLKEAGFENPEEEFAKLFKLFTTNQQATEERTFRGKLFLDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /evidence=not_experimental
/protein_id="AAB64617.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /protein_id="AAB64616.1"
/db_xref="GI:786304"
KNIQRRIASNGQNKVTAEEMSKLYCESKNLRSIQRGMFLCPWNVTAVKALNECF'
                                                                                                                                                erlhhyenanelanrligilekkfekt@derelfnfaiikg@farihlglgnfelsie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note="P9677.8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene="RPB6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="P9677.7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene="SKI3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'db xref="GI:786306"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     codon start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene="RPB6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oin(3890.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .3909,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .5112)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ı,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (e.g.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      II,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
```

complement (9710.
/gene="RPC3"
complement (9710.

```
Query Match
Best Local Similarity
Matches 409; Conserv
                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
               Conservative
                                                                                                                                                                                     /translation="MSNTSEDNITVREVTENDKEGWQRLWKSYQDEYEVSFEDDLDDF
NFGRELDENIKUMAAVAVESSSEKIIGMINFFNHMTTWDFKDKIYINDLYVDENSRVK
GAGGKLIQFVYDEADKLGTPSYYWCTDESNHRAQLLYVKVGYKAPKILYKRKGY"
                                                                                                                     complement(16937. .19570)
/gene="P9677.13"
                                                                                                                                                                        complement (16937, .19570)
                                                                                                                                                                                                                                                                                                                                                                                 complement (15542. .16012)
/gene="P9677.12"
complement (15542. .16012)
/gene="P9677.12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    translation="mssndsndtdkohtrldptgvdday1ppbopetkhhrekisrdt
LRDhetaAVGEEGTEWELWCAYVICNVANHBYALVAAPDGSHEGQLIMIAIGEGESV
MESINCEAGVSGGALWEAMSLSLCHARAVSPTRCVVMWSQIVAGMAAGGAASAMTPG
EVLFANSLGLGCSRTRGLFLEMEGTAIICLTVLMTAVUKRETMEMAALPGISILFIAH
VALTAXTGTGVNPARSLGAAVAARYSPHYHWIYWIGTLLGSILAWSVWQLLQILDYTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DGVAHLLNR FNFONTNTKSALKLVRESELLGGTFKSTLDREYITLKATFLKDDLPYYV
NALADVIJKTAFFCHELTESVILFAARVDYAVARGCFPVKSAEDQLYAITFRKGLGNPLL
YDGVERVSLODIKOFADKVYTKENLEVSGENVVEADLKEFVESLLSTLFAGKSLVSK
SEPKFFLGEENRVRFIGDSVAALGIPVNKASLAQYEVLANYLTSALSELSGLISSALS
DKFTDGGIFTLEVRDQDSAVVSSNIKKIVADLKKGKDLSPAINYTKLKNAVQNESVSS
                                                                                                                                                                                                                                                                                                                           3'-acetyltransferase of P. aeruginosa (Swiss Prot. accession number P23181)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Belongs to the MIP family
proteins."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="P9677.5"
14493. .15410
                                                                             note="Similar to S. cerevisiae hypothetical RD799 (PIR accession number S45161) and S. r
                                                                                                                                                            /gene="P9677.13"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          YVTAEKAASTKEKAQKKGETSSSSAVAEV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /evidence=not_experimental
/protein_id="AAB64621.1"
/db_xref="GI:786301"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIELNFDAVKDFKLGKFNYVAVGDVSNLPYLDEL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TVSLTINLDRFMKGRRSKQLINLAKTRVGSVTAQVYKIALRLTEQKSPKIRDBLTQTG
LLQDLEBAKSFQDEAELVEEKTPGLTENAIDLARHLPAELDLRGSLLSRKPSDNKKRS
GSNAAASLPSKKLKTEDGFVIPALPAAVSKSLQBSGDTQEEDEBEEDLDADTEDPHSA
SLINSHLKILASSNEFFELNETKRGVYYVPYSKLMPVLKSSVEBYVIASTLEBSAMFLF
RCIEDNKLVSEKIINSTALMKEKDIRSTLASLIRYNSVEIQBVPRTADRSASRAVFL
RCKETHSYNFMIQNLENNMANILFKKEKLKQENSTLLKKANRDDVKGRENELLLPSEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DLFLYKELVKAHLGERAASVIGMLVALGRLSVRELVEKIDGMDVDSVKTTLVSLTQLR
CVKYLQETAISGKKTTYYYYNEEGIHILLYSGLIIDEIITQMRVNDEEEHKQLVAEIV
QNVISUSSLTVEDYLSSVTSDSMKYTISSLFVQLCEMGYLIQISKLHYTPIEDLWQFL
YEKHYKNIPRNSPLSDLKKRSQAKMNAKTDFAKIINKENELSQILTVDPKTSLRIVKP
                                                                                                                                                                                                                                                     protein_id="AAB64622.1"
|db_xref="GI:786308"
                                                                                                                                                                                                                                                                                                           codon_start=1
                                                                                                                                                                                                                                                                                                                                                            note="Similar in C-terminus to Gentamicin
                                                                                                                                                                                                                                                                                        evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="P9677.5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product="Ubiquinol-cytochrome C reductase core protein 2"/protein_id="AAB64620.1"
/protein_id="AAB64620.1"
/db xref="GI:786302"
/translation="MLSAARLOFAQGSVRRLTVSARDAPTKISTLAVKYHGGSRYATK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="QCR2"
12014. .1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NQLKMVNERELNVFARLSRLLSLWEVFQMA"
12014. .13120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
/product="74 kD subunit of RNA Polymerase III (Swiss accession number P32349)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="QCR2"
/note="P9677.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /	ext{translation} = 	ext{"MDELLGEALSAENQTGESTVESEKLVTPEDVMTISSLEQRTLNP}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /protein_id="AAB64619.1"
/db_xref="GI:786307"
                           10.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .15410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .13120
           0;
                           Score 217.4; DB 8; Pred. No. 2.6e-25;
           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of transmembrane
       Indels
                                          Length 37497;
     9;
                                                                                              protein
     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            channel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Prot
     ν.
                                                                                                                           REFERENCE
AUTHORS
TITLE
                   COMMENT
                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                           YSCRP026A/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뫄
                                                      JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                        PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
Original 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
```

```
YSCRP026A 2133
S.cerevisiae RNA polymerase
                                                                                                                          Archambault, J., Schappert, K. T. and Friesen, J. D. A suppressor of an RNA polymerase II mutation of Saccharomyces cerevisiae encodes a subunit common to RNA polymerases I, II, \varepsilon
                                                                                                                                                                                                                                                                                  Saccharomyces cerevisiae (baker's yeast) Saccharomyces cerevisiae
                                       2247052
                                                                   91061718
                                                                                                                                                                                                                                   Bukaryota; Fungi; Ascomycota; Saccharomycotina;
Saccharomycetales; Saccharomycetaceae; Saccharom
                                                                                                                                                                                                                                                                                                                                                             RNA polymerase II; c-myc
                                                                                                                                                                                                                                                                                                                                           tyrosine kinase.
                                                                                                                                                                                                                                                                                                                                                                                          M33924.1
                                                                                                                                                                                                                                                                                                                                                                                                                         M33924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTAGAAAACATGATCTTCTCACGCATTAT 2837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAAAGAAAATGAATTAGTTGAACATTAT 1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGACGACTCACTAGTAACCAAAAATTGGAAGTGTCATATATGTCCTGATATGTCTTTTT 2866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGATGATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGATGTGGGGAAATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCCTATTTGTAGCAAACCATGTGTGGGGGAAAATGGTTTACAAATGCACATGATTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCCTAAATGTGGTAAAGGTTGTGTGTGAAAAAAAGGTTTATCTTCACATATGTTAAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTTTCGGATATGGTCACAATTGCAATCGCATATAAAAAATGATCATCCTAAATTAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               АТТТССАВАСТТССТСАСТАТТАСАВТТТСАТАТАВАВАСЛАСТССАТССАВАВСТТАВАТ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACATCACGATCCTGAGGTAGAAAATCCTTACCAATGTACTTTTGCTGGTTGTTGCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACATCA-----TGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAA 1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ССТСТВААСАЛГСТААГААСТТТТСАСТССВАССТТСВАВАТТАССАСВАСАТВААТТВА 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATTCTACAAGCATCCACAATTAAGGGCACATATTTTATCTGTTCATTTACATTAAACTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATTTTATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTGTCCACACTGCAATAAAAGCTTTCAGAGGCCATATAGGCTAAGAAATCACATTTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATACGAAACCATTCCAATGTTCTTATTGTGGAAAAGGAGTGACGACTCGCCAGCAACTGA 3286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAAAAAAAACÇATTCCATTGTTCAGTGTGTGAAAAGGGGTTAATTCTCGACAACACTTGA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTGTGCAAAATCCTTCGTTAAAAAGAGTCACTTAGAGAGACACTTGTATACGCATTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTGTGATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCCAAAGACATATTTCTGTGACTATGATGGCTGTGATAAGGCATTTACAAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTTGACTGAACACCAATTAAGCGTACATCAGGGTTTA---AGAGCATTTCAGTGTGATA 3406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACG 900
                                                                                                                                                                                                                   (bases
                                                                                        Cell.
             source text:
                                                                                        Biol. 10
                                                                                                                                                                                                              to 2133)
                                                                                   (12),
S.cerevisiae single-copy plasmid DNA, clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2133
                                                                                                                                                                                                                                                                                                                                                           proto-oncogene;
                                                                                   6123-6131 (1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 bp DNA linear 1
II sixth subunit (RP026)
                                                                                                                                                                                                                                   Saccharomyces
                                                                                                                                                                                                                                                                                                                                                           transmembrane
                                                                                                                                                                                                                                                        Saccharomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLN 27-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene, complete
                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                               and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3463
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1010 АСААСАСТТGААААGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAA 1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1130 АЛАЛАСАТТАЛССТСТАЛАСАЛТСТАЛТАЛАСТТТСАСТССАССТТСЛАЛАТТАССАСА 1189
                                           1424
                                                                                                                               1364 TATGTTAAGTCATGATGATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGATGT 1423
                                                                                                                                                                           136 TAAATTAAAATGTCCTATTTGTAGCAAACCATGTGTGGGGGAAAATGGTTTACAAATGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   556 TTCAGTGTGATAGTGTGCAAAATCCTTCGTTAAAAAGAGTCACTTAGAGAGACACTTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               890 TACAGTGGACGATTGTGATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGT
                                                                                                                                                                                                                                                                                                                                                          256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             340;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Draft entry and ckindly submitted by J.D.Friesen,
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGTCAAGAAGCATTTTATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGA 1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAGCAACTGAAGCGACACGAAGTAACGCATACCAAATCTTTCATTTGTCCAGAGGAAGG 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACGCATTCTGATACGAAACCATTCCAATGTTCTTATTGTGGAAAAAGGAGTGACGACTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCACATTCCGAAAAAAAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGGTTAATTCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGCAACCTCCGATTCTACAAGCATCCACATTAAGGGCACATATTTATCTGTTCATTT 317
                                                                                                                                                                                                                                                                                                                                                                                                      ACATAAATTAAAACATCA----
                                                                                                                                                                                                                                                                                                                                                                                                                                             ACATAAACTAACCTGTCCACACTGCAATAAAAGCTTTCAGAGGCCATATAGGCTAAGAAA
                                                                                                                                                                                                                  AAAACTTAAATGTCCTAAATGTGGGTAAAGGTTGTGTGGGAAAAAAAGGTTTATCTTCACA 1363
                                                                                                                                                                                                                                                                TTGTTGCAAAGAGTTTCGGATATGGTCACAATTGCAATCGCATATAAAAAAATGATCC
                                                                                                                                                                                                                                                                                                            TIGITITAAAAAITITCCAAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCC 1303
                                                                                                                                                                                                                                                                                                                                                          TCACATTTCTAAACATCACGATCCTGAGGTAGAAAATCCTTACCAATGTACTTTTGCTGG
  TATGTCTTTTTCTA
                                           GGGGAAATTTGCAA 1437
                                                                                       CATGATTATTCATGACGACTCACTAGTAACCAAAAATTGGAAGTGTCATATATGTCCTGA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Toronto, Ontario, CANADA M5G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hospital for Sick Children
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation="msdyebafndgnenfedfdvehfsdeetybekpgfkdgettdan
gktivtggngpedfqqheqirkktlkekaipkdqrattpymtkybrarilgtralqis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1122. .>1569
/note="RNA polymerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MNAPVFVDLEGETDPLRIAMKELAEKKIPLVIRRYLPDGSFEDWSVEELIVDL'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic_DNA"
/db_xref="taxon:4932"
join(1026. .1045,1122.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="RNA polymerase II sixth subunit (RP026)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /protein_id="AAA34989.1"
/db_xref="GI:172453"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Saccharomyces cerevisiae"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /number=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  codon_start=1/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="RNA polymerase II sixth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /number=2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note="RP026 intron"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             jim@sickkids.toronto.edu.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          computer-readable sequence for [Unpublished (1990)]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAY-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 199.2; DB 8
Pred. No. 3.3e-22;
0; Mismatches 208
                                                                                                                                                                                                                                                                                                                                                                                                        TGGTGGATCTCCTGCTTATCAATGTGATCATCCTGG 1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .1569)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sixth subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         subunit (RP026)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (RP026)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         437
                                                                                                                                                                                        77
                                                                                                                                                                                                                                                                              137
```

뮹 8 밁 δÃ 맒

Ś

맑

8 В 8 ₽ Ş В Ś 망 Ş 뮍 8

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                       8
                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDITINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                Best Local Similarity Matches 347; Conserv
                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                       _feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Souciet, J.I., Aigle, M., Artiguenave, F., Blandin, G.,
Bolotin-Fukuhara, M., Bon, E., Brottier, P., Casaregola, S.,
de-Montigny, J., Dujon, B., Durrens, P., Lepingle, A., Llorente, B.,
Malpertuy, A., Neuveglise, C., Ozier-Kalogeropoulos, O., Potier, S.,
Saurin, W., Tekaia, F., Toffano-Nioche, C., Wesolowski-Louvel, M.,
Wincker, P. and Weissenbach, J.
Genomic exploration of the hemiascomycetous yeasts: 1. A set of
yeast species for molecular evolution studies
FEBS Lett. 487 (1), 3-12 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CNS06ING 797 bp DNA linear STS 30-NOV T7 end of clone ASOAA022B07 of library ASOAA from strain CLIB of Saccharomyces bayanus, sequence tagged site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (07-SEP-2000) Genoscope - Centre National de Sequencage, 2 rue Gaston Cremieux, CP 5706, 91057 EVRY cedex, FRANCE. (E-mail: seqrefægenoscope.cns.fr - Web : www.genoscope.cns.fr) This STS is part of a random genomic sequencing program of thirteen yeast species: Saccharomyces bayanus var. uvarum, Saccharomyces carigus, Saccharomyces servazii, Zygosaccharomyces rouxii, 29058ccharomyces rouxii,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Saccharomycetales; Saccharomycetaceae; 1 (bases 1 to 797)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; Saccharomycetaceae; Saccharomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Saccharomyces bayanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Saccharomyces bayanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AL400514
83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL400514.1 GI:12156635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bon, E., Neuveglise, C.,
Aigle, M. and Durrens, P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Saccharomyces kluyveri, Kluyveromyces thermotolerans, Kluyveromyces lactis var. lactis, Kluyveromyces marxianus var. marxianus, Pichia angusta, Debaryomyces hansenii var. hansenii, Pichia sorbitophila, Candida tropicalis and Yarrowia lipolytica. Genomic inserts of 3 to 5 kb were prepared and both extremities were sequenced. See keywords for description of this sequence and for the sequence of the other extremity of this insert.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Saccharomyces bayanus var. uvaru
FEBS Lett. 487 (1), 37-41 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genomic exploration of the hemiascomycetous yeasts:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11152880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20584715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11152876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20584711
                                            GACGATTGTGATAAAGCATTTTTCAGAAAATCACATTTTGGAAACACATATTGTATCACAT 956
ĠĀĊĀĀTTĠTĠĊĀĀĀĀTĊĊŤŦĪĠŤTĀĀRĀĀGĀGTĊĀŤĊĪĀĠĀGĀGĠĊĀĊŦTGŦŤŦŤĊĠĊĀŤ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 797)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 797)
                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                    /clone lib="ASOAA"
/note="end : T7"
<2. .>796
                                                                                                                                                                                                                              PZF1 ; TFIIIA (transcripti /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="genomic DNA"
/strain="CLIB 533"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                   /note="similar to Saccharomyces cerevisiae ORF YPR186c [PZF1; TFIIIA (transcription initiation factor)]"
                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:4931"
/clone="ASOAA022B07"
                                                                                                                                                                                                                                                                                                                                                                                                                                  'variety="uvarum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Saccharomyces bayanus"
                                                                                                                          9.4%;
                                                                                                     Score 193; DB 11;
Pred. No. 3.7e-21;
1; Mismatches 231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Casaregola,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Artiguenave, F., Wincker, P.,
                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STS 30-NOV-2001
                                                                                                           <u>ი</u>
                                                                                                             Gaps
```

```
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
ORIGIN
                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                FEATURES
                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
AC138126/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                     TITLE
                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             957
                                                                                                                                                                          Direct Submission
Submitted (17-DEC-2002) DOE Joint
Drive, Walnut Creek, CA 94598, USA
Draft Sequence Produced by DOE Joi
                                                                                                      www-shgc.stanford.edu
Quality: Phrap Quality >=40 100%
Estimated Total Number of Errors
                                                                                                                                               Finishing Completed at Stanford Human Genome
                                                                                                                                                                 Draft Sequence I
                                                                                                                                                                                                                                  2 (bases 1 to 169063)
DOE Joint Genome Institute and Stanford Human
                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                  Direct
                                                                                                                                                                                                                                                                                         1 (bases 1 to 169063)
DOE Joint Genome Institute and Stanford Human
                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens chromosome
AC138126
AC138126.1 GI:27151357
                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                            AC138126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTTGAGAÄAGCÁCGACCTCCTTACTCÁCTACCAGATGACGCÁT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTGCAAAGAAAATGAATTAGTTGAACATTATAATATCTTCCAT 1475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTCATGATGATTCTACCATGATCAAAATATGGGACTTGTGGATTATTGTGATGTGGGGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTCATGATGAATCTTTGGTAACTAAGAACTGGAAATGTCATATTTGTTCTAATACATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAATGCCCATTTGCAACAAGCCTTGTGTAGGGGAAAAATGGTCTACAAATGCATATGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAATGTCCTAAAIGTGGTAAAGGTTGTGTGGGAAAAAAGGTTTATCTTCACATATGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAATTTCCAAAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTT 1310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACAGAGTACCGTATATGGTCACAGTTGCAATCACATATCAAAAATGACCATCCTAAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTAAAACATCATGGT-----GGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ттаасстставасватстватвавстттсвстссвассттсававттассвсавасатава 1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGCATTTTATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAAACA 1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTAACCTGTCCACAATGTAGTAAARTTTTCAGAGACCCTACAGGCTAAGGAATCATATC 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCCGĂTTTTATAAGCACCCTCAATTAAGGGCTCATATTCTATCTGTCCACCTAGACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGAAAAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAA 1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTGATACGAAGCCATTCCAATGTTCTTATTGTGGCAAGGGGGTGACAACTCGACAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCGAAAAAAACCATTCCATTGTTCAGTGTGTGTAAAGGGGGTTAATTCTCGACAACAC 1016
                                                                                                                                                                                                                                                                               Submission
                                                                                            Location/Qualifiers
                      /db_xref="taxon:9606"
/chromosome="19"
                                                     /mol
                                                             organism="Homo sapiens"
                                                                                .169063
                                                  type="genomic
                                                                                                                                                                                                                                                                                                                                                                     (human)
                                                                                                                                                                                                                                                                                                                                                                                                                          169063 bp
me 19 clone :
                                                    DNA"
                                                                                                                                                                             Joint Genome Institute
                                                                                                                                                                                             USA
                                                                                                         of
is
                                                                                                                                                                                                                                                                                                                                                                                                                       RP11-274A19, complete sequence.
                                                                                                                                                                                                         Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                        Sequence;
                                                                                                                                                                                                      Institute,
                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                    Genome
                                                                                                                                                                                                                                                                                           Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             667
                                                                                                                                                                                                                                                                                                                                                                                                                                    PRI 17-DEC-2002
                                                                                                                                                                                                                                  Center.
                                                                                                                                                                                                                                                                                           Center.
                                                                                                                                                                                                      Mitchell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               262
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
AC073544/c
                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
VERSION
                          COMMENT
                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                    Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                            AUTHORS
                                                        JOURNAL
                                                                                                                                  JOURNAL
                                                                                                                                                   TITLE
                                                                                                                                                                                                                TITLE
                                                                                                                                                                                               JOURNAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 298;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                79600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            79960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       846
Submitted (19-JUN-2002) DOE Joint Genome Institute, 2800 M. Drive, Walnut Creek, CA 94598, USA
On Jun 19, 2002 this sequence version replaced gi:13699752.
Draft Sequence Produced by DOE Joint Genome Institute
                                                                     Direct Submission
Submitted (22-JUN-2000) Production Sequencing Facilit
Genome Institute, 2800 Mitchell Drive, Walnut Creek,
3 (bases 1 to 177299)
DOE Joint Genome Institute and Stanford Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    726 GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCTTCATCACGTCCC
                                                    Direct Submission
Submitted (19-JUN-2002)
                                                                                                                                                                                                                                                                                                                                Homo sapiens chromosome 19
AC073544
AC073544.4 GI:21465367
                                                                                                                                                                                                                        1 (bases 1 to 177299)
DOE Joint Genome Institute and
                                                                                                                                                            DOE Joint Genome Institute
                                                                                                                                                                                            Unpublished
                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                     Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                    AC073544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          h 4.9%;
Similarity 50.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTTGATTGTGCATAAGATAATTCATACTAAAAAAAAACCTACAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATGCTGGTGAGAAATCTTAGAAATGTGAAGAATGTAACAAAACCTTTAAAAGTTGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTAAAAGATGTAACAGTGATTTTGAAAACTTCAAAGTTTTCTAAACATAAAGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ТGТАРАСАЛГСТАРТАРА В ТТТТСАСТСВАССТТСРАРАТТАВСАСА В В ТЕРВЕТ В 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATAAACATCAATCTTTAA----GACATCATATATTATCTGTTCATGAAAAAAACATTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGAACATAAGAAAATTCATACTGGAGAGAAACCCTACACATGT------GAAGAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACCAGTCCTCAAACCTTACTGGACATAAGAAAATTCATACTGGTGAGAAACTCTACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATAAGAGAATTCATACTGGAGAGAAACCCTACCAATGTGAAAAATGTGGCAAAGCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGAAATCACCCATACAAGTCATTTAAATGTACATTTGAAAAATTGTCAAGAAGCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAACCCTACCAATGTGAAGAATGTGGTAAAGCCTTTAACCAGTCCTCACACCTTACTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAGAAATCCTACAAATGTGAAGAATGTGGCAAAGCTTTCTATCGATCCTCAAAACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAACCATTCCATTGTTCAGTGTGTGATAAGGGGGTTAATTCTCGACAACACTTGAAAAGA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCAAAĞCCTTTAACCATTCCTCACATCTTGCTACACATAAGGTAATTCATACTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                                             (bases 1 to 177299)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAATGTGGCAAAGCTTTTAACCAGTCCTCAATCCTTACTACACATAAGAGAATTCATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                    Chordata;
                                                                                                                                                                                                                                                                                                                                                                177299 bp
me 19 clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 101; DB 9;
Pred. No. 6.1e-07;
D; Mismatches 280
                                                                                                                                                                                                                                                   Catarrhini; Hominidae;
                                                                                                                                                                                                                                                               Craniata; Vertebrata;
                                                                                                                                                                                                                         Stanford
                                                                                                                                                                                                                                                                                                                                                           DNA linear
RP11-359H18, comp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         280;
                                                                                                                                                                                                                      Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 169063;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                           Facility,
Creek, CA
                                                                                                                                                                                                                    Genome
                                                                                                                                                                                                                                                                                                                                                             complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                          79554
                                               2800 Mitchell
                                                                                                                                                                                                                                                                                                                                                                            PRI
                                                                                                                                                                                                                                                                  Euteleostomi;
                                                                            Center
                                                                                                                                                                                                                      Center.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9;
                                                                                                                                                                                                                                                                                                                                                             sequence.
                                                                                                         94598,
                                                                                                           DOE Joint
94598, USA
                                                                                                                                                                                                                                                                                                                                                                            19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    79601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              79721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              80015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
```

```
ORIGIN
                      REFERENCE
AUTHORS
                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                        RESULT 11
AX714042
                                                                                                                                                                                                              DEFINITION
                                                                                                                                                   KEYWORDS
                                                                                                                                                                         VERSION
                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                       FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 298;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               163740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    163446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       163506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                163386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               163326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Finishing Completed at Stanford Human Genome Center www-shgc.stanford.edu Quality: Phrap Quality >=40 99.9% of Sequence; Estimated Total Number of Errors is 0.2. NOTE: BACTERIAL TRANSPOSONS excised at 14620 and 98 Location/Qualifiers
                                                                                                                                                                                           Sequence 726 from Patent AX714042
                                                                                                         Homo sapiens (human)
                                                                                                                                                                       AX714042.1 GI:29888970
                                                                                                                                                                                                                                       AX714042
Isogai,T., Sugiyama,T., Otsuki,T., Wakamatsu,A., Sato,H., IYamamoto,J.I., Isono,Y., Hio,Y., Otsuka,K., Nagai,K., Irie,
                                                                                        Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 дададстатттосасататсаассстстваталассствтватссвассатсаттатта
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCTTCATCACGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGAGAAATCCTACAAATGTGAAGAATGTGGCAAAGCTTTCTATCGATCCTCAAAACTT 163621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAATGTGGCAAAGCTTTTAACCAGTCCTCAATCCTTACTACACATAAGAGAATTCATACT 163681
                                                                  Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTAAAAGATGTAACAGTGATTTTGAAAACACTTCAAAGTTTTCTAAACATAAAGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACCAGTCCTCAAACCTTACTGGACATAAGAAAATTCATACTGGTGAGAAACTCTACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCAAAGCCTTTAACCATTCCTCACATCTTGCTACATAAGGTAATTCATACTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGAACATAAGAAAATTCATACTGGAGAGAAACCCTACACATGT-----GAAGAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTCCAA 1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ТСТАВАСЛАТСТВАТАВАСТТТТСАСТССВАССТТСВАВАТТАССАСАСАТАВАТТАВАВ 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        татадасатсадтсттад---- GACATCATATATTATCTGTTCATGAAAAAACATTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATAAGAGAATTCATACTGGAGAAAACCCTACCAATGTGAAAAATGTGGCAAAGCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>AĂĂCCCTACCAATGTGAĂGAATGTGGTĂĂĂĞCCTTTĀÁCCAGTCCTCĂCĂCCTTÂCTĀGĀ</u>
                                                                                                                                                                                                                                                                                                                                                                                   ACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACT
                                                                                                                                                                                                                                                                                                                                            ACTTGATTGTGCATAAGATAATTCATACTAAAAAAAAACCTACAAGT 163160
                                                                                                                                                                                                                                                                                                                                                                                                                             TATGCTGGTGAGAAATCTTAGAAATGTGAAGAATGTAACAAAACCTTTAAAAGTTGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /chromosome="19"
/clone="RP11-359H18"
                                                                  Eutheria;
                                                                  Metazoa; Chordata;
Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .177299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches 280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 101; DB 9;
Pred. No. 6.1e-07;
                                                                                                                                                                                                                     2132 bp
EP1293569
                                                                    Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 177299;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                          1309
                                                                                                                                                                                                                                             PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                              Euteleostomi;
                                                                                                                                                                                                                                             15-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        163267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               163507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   163567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             163387
                                                                                                                                                                                                                                                                                                                                                                                                                                        163207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
```

Дb γ В Ş

Š

g

Ś

망 Š Дb

日

Š

밁 Š 밁 Ş

Kodaira, H.,

Дb γQ 멍 Ş

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
AK056088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                     REFERENCE
                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                               Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 4.8%;
Best Local Similarity 50.6%;
Matches 297; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1384 GAATGTGGCAAAGCTTTTAACCAGTCCTCAATCCTTACTACACATAAGAGAATTCATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tamechika,I., Seki,N., Yoshikawa,T., (Masuho,Y. Full-length cDNAs Patent: EP 1293569-A 726 19-MAR-2003; Helix Research Institute (JP); Research Helix Research Patents (JP); Research P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biotechnology (JP)
                                                                                                                                                                AK056088.1 GI:16551397 oligo capping; fis (full Homo sapiens (human)
                                                                                                                                                                                                                                                                              AK056088 2132 bp
Homo sapiens cDNA FLJ31526 fis,
similar to ZINC FINGER PROTEIN 4
                       Ninomiya, K.,
                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                            AK056088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGAACATAAGAAAATTCATACTGGAGAGAAACCCTACACATGT-----GAAGAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAGAAATCCTACAAATGTGAAGAATGTGGCAAAGCTTTCTATCGATCCTCAAAACTT 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCTTCATCACGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTAAAAGATGTAACAGTGATTTTGAAAACACTTCAAAGTTTTCTAAACATAAAAAAT 1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAACCCTACCAATGTGAAGAATGTGGTAAAGCCTTTAACCAGTCCTCACACCTTACTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTCCAA 1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ТСТАДАСАЛГСТААТАЛАСТТТСАСТССАССТТСАДАЛТТАССАСЛАСАТАЛАТТДАЛА 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACCAGTCCTCAAACCTTACTGGACATAAGAAAATTCATACTGGTGAGAAACTCTACAAA 1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ТАТАААСАТСААТСТТТАА----GACATCATATATTATCTGTTCATGAAAAAACATTAACG 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTT 1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAACCATTCCATTGTTCAGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCAAAGCCTTTAACCACTCCTCACACCTTGCTACACATAAGGTAATTCATACTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATAAGAGAATTCATACTGGAGAGAAACCCTACCAATGTGAAAAATGTGGCAAAGCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTTGATTGTGCATAAGATAATTCATACTAAAAAAAACCTATAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATGCTGGTGAGAAATCTTAGAAATGTGAAGAATGTAACAAAACCTTTAAAAAGTTGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
1. .2132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="unassigned DN
/db_xref="taxon:9606"
Furuya, T.,
     Wagatsuma,M., Kanda,K.,
Furuya,T., Takahashi,M.,
                                                                                      ; Chordata; 
; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 99.4; DB 6;
Pred. No. 2.3e-06;
0; Mismatches 281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yoshikawa, T.,
                                                                                                                                                                                                          insert
                                                                                         Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA"
                                                                                                                                                                                                                                                                                       mKNA linear
;, clone NT2RI2000341,
43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Research
                                                                                                                                                                                                       sequence)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Otsuka, M.,
        Kikkawa, E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Association
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 2132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nagahari,K.
                                   Yokoi, T.,
              Omura, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1309
                                                                                                                                                                                                                                                                                                                                                        PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9;
                                                                                                                                                                                                                                                                                                                                 moderately
                                                                                                                                                                                                                                                                                                                                                           01~AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
              Abe, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
```

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                   1558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (24-007-2001) Takao Isogai, Helix Research Institute, Genomics Iaboratory; 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan (E-mail:genomics@hri.co.]p, Tel:81-438-52-3975, Fax:81-438-52-3986) REDO human cDMA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDMA full insert sequencing: Research Association for Biotechnology (RAB); cDNA library construction: Helix Research Institute (HRI) (supported by Japan Key Technology Center etc.); 5'- & 3'-end one pass sequencing: RAB, HRI, and Biotechnology Center, National Institute of Technology and Evaluation; clone selection for full insert sequencing: RAB and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kamihara,K., Katsuta,N., Sato,K., Tanikawa,M., Yamazaki,M., Sugiyama,T., Irie,R., Otsuki,T., Sato,H., Wakamatsu,A., Ishii,S., Yamamoto,J., Isono,Y., Kawai-Hio,Y., Sato,K., Nishikawa,T., Kimura,K., Yamashita,H., Matsuo,K., Nakamura,Y., Sekine,M., Kikuchi,H., Murakawa,K., Kanehori,K., Takahashi-Fujii,A., Oshima,A., Sugiyama,A., Kawakami,B., Suzuki,Y., Sugano,S., Nagahari,K., Masuho,Y., Nagai,K. and Isogai,T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 (bases 1 to 2132)
Isogai, T., Otsuki, T.
GGCAAAGCCTTTAACCACTCCTCACACCTTGCTACACATAAGGTAATTCATACTGGAGAG
                                                                                                                                                                                                                                          GGĀGĀĀATCCTACĀAĀTGTGĀĀĠAATGTĞGCĀĀĀĞCTTTCTĀTCGATCCTCAAAĀCTT
                                                                                                                                                                                                                                                                                                   AAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                         GATAAAGCATTITTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA 965
                                                                                                                     ACTGAACATAAGAAAATTCATACTGGAGAGAAACCCTACACATGT-----GAAGAATGT
                                                                                                                                                                              GAGCAACATTTAAGAACCCACAGTAATGATCGACGGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                                                                                                                                                                                                                               GAATGTGGCAAAGCTTTTAACCAGTCCTCAATCCTTACTACACATAAGAGAATTCATACT 1443
                                                                                                                                                                                                                                                                                                                                                                                                                        GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCTTCATCACGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /protein_id="bab71090.1"
//db xref="GI:16551398"
//db xref="GI:16551398"
//db xref="GI:16551398"
//db xref="GI:16551398"
//db xref="GI:16551398"
//translation="mwAbepv1CSHFAQHFSPEQNIKDSFQKVTPRRYGKCEHENLQL
SKSVDECKVQKGGYNGLNQCLPTYQSKIFQCDKYMKIFHKFSNLMGHKVRHTRKKPFK
YKEFGKSFCIFSNLTQHKIITTRDKLYKREECGKAFNGSSIFTKHKRIHTGEKFYKCEECGKY
YKEFGKSFCIFSNLTTHKIITTRDKLYKREECGKAFNQSSHLTTHKIITTGEKPYKCEECGKAF
YKEFGKSFTLTTHKIITTREKLNEYKECGKAFNQSSHLTTHKIITTGEKFYKCEECGKAF
DKAFNQSSTLTTHKIITTGEKFYKCEECGKAFNQSSHLTTHKIITTGEKFYKCEECGKAFNQ
AFNQSSHLTHKIITTGEKFYKCEECGKAFNQSSNLTHKNIHTEEKFYKCEECGKAFNQ
FSNLTTHKRIHTGEKFYCEECGKAFNQSSLITTHKRIHTGEKSYKCEECKAFNQSSKL
KLTEHKKIHTGEKFYCEECGKAFNUSSHLATHKVIHTGEKFYCEECGKAFNQSSKL
KLTHKKIHTGEKFYCEECGKAFNUSSHLATHKVIHTGEKFYCEECGKAFNQSSKL
KLTHKKIHTGEKFYCEECGKAFNUSSHLATHKVIHTGEKFYCEECGKAFNQSSKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRHKRIHTGEKPYQCEKCGKAFNQSSNLTGHKKIHTGEKLYKPKRCNSDFENTSKFSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="cloning vector: pME18SFL3-mRNA from NT2 neuronal precursor cells treated 2-weeks mitotic inhibitor after
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        148. .1878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="NT2RI2000341"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Homo sapiens"

mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -weeks
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    type="teratocarcinoma"
| lib="NT2RI2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          line="NT2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     retinoic acid (RA) induction.~majorly NT2 neuron"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 99.4; DB 9;
Pred. No. 2.3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Sugiyama, T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 2132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
   1617
                                                                                                                                                                                 905
                                                                                                                        1557
                                                                                                                                                                                                                                             1503
                                                                                                                                                                                                                                                                                                                                                                                                                           785
```

밁

Ś

밁 γŞ

Conservative

,,

9;

Gaps

2

Дb

8 Дb Ş

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AC099500/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
    Query Match
Best Local Similarity
Matches 297; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1618
                                                                                                                                                                                                                                                     Finishing Completed at Stanford Human Genome Center
www-shgc.stanford.edu
Quality: Phrap Quality >=40 100% of Sequence;
Estimated Total Number of Errors is 0.1.
NOTE: This insert is not the entire sequence of the clone (entire sequence is 153.8kb). It is clipped at the overlap with AC008981.
                                                                                                                                                                                                                                                                                                                                                                                                   Drive, Walnut Creek, CA 94598, USA
On May 29, 2002 this sequence version replaced gi:16930916.
Draft Sequence Produced by DOE Joint Genome Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (15-NOV-2001) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA 3 (bases 1 to 138627)
DOE Joint Genome Institute and Stanford Human Genome Center.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (29-MAY-2002) DOE Joint Genome Institute,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 138627)

DOE Joint Genome Institute and Stanford Human Genome Center.
                                                                                                                                                                                                                                                                                                                                                                                         www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 (bases 1 to 138627)
DOE Joint Genome Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC099500.2 GI:21240690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens chromosome 19 clone RP11-209J6, complete sequence. AC099500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATGCTGGTGAGAAATCTTAGAAATGTGAAGAATGTAACAAAACCTTTAAAAGTTGTCAC 1917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTTGATTGTGCATAAGATAATTCATACTAAAAAAAAACCTATAAGT 1964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAAATTTCCAA 1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTABARGATGTAACAGTGATTTTGABARCACTTCAAAGTTTTCTBAACATABARGAAAT 1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ТСТАРАССАТСТВАТАВАСТТТТСАСТССВССТТСАЛАЛТТВССАСРАСАТВЛАВТТВАВА 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATAAACATCAATCTTTAA----GACATCATATATTATCTGTTCATGAAAAAAACATTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTTGTCAAGAAGCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAACCCTACCAATGTGAAGAATGTGGTAÄÄĞCCTTTAÄCCAGTCCTCÄCÄCCTTÄCTÄĞÄ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACCAGTCCTCAAACCTTÁCTGGÁCÁTAAGAAÁATTCATACTGGTGÁGÁAÁCTCTACÁAA 1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATAAGAGAATTCATACTGGAGAGAAACCCTACCAATGTGAAAAATGTGGCAAAGCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAACCATTCCATTGTTCAGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGA 1025
                                                                                                                                                                                                                                            number of bases overlapped is
                                                                                               /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/chromosome="19"
/clone="RP11-209J6"
                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                          .138627
                     4.8%;
Score 99.4; DB 9;
Pred. No. 1.1e-06;
0; Mismatches 281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         138627 bp
                                                                                                                                                                                                                                              27192.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                    Length 138627;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2800 Mitchell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRI 29-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1737
```

```
뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
AC138469/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ДЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Locus
                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AC138469 169500 bp DNA linear
Homo sapiens chromosome 19 clone RP11-189C24, ***
PROGRESS ***, 5 ordered pieces.
                                                                                                             Submitted (08-JAN-2003) DOE Joint Genome Institute, 2800 Mit Drive, Walnut Creek, CA 94598, USA
* NOTE: This is a 'working draft' sequence. It currently
* consists of 5 contigs. Gaps between the contigs
* are represented as runs of N. The order of the pieces
* is believed to be correct as given, however the sizes
* of the gaps between them are based on estimates that have
                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria; Primates; (
1 (bases 1 to 169500)
DOE Joint Genome Institute and
                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                                              2 (bases 1 to 169500)
DOE Joint Genome Institute and Stanford Human Genome
                                                                                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                            AC138469.1 GI:27544967
HTG; HTGS_PHASE2; HTGS_ACTIVEFIN.
                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCATCACGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGÁGÁGAAATCCTACAAATGTGAÁGAATGTGGCAAAGCTTTCTATCGÁTCCTCAAAACTT 48580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAATGTGGCAAAGCTTTTAACCAGTCCTCAATCCTTACTACACATAAGAGAATTCATACT 48640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATAAACATCAATCTTTAA----GACATCATATTATCTGTTCATGAAAAAACATTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATAAGAGAATTCATACTGGAGAGAAACCCTACCAATGTGAAAAATGTGGCAAAGCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAACCCTACCAATGTGAAGAATGTGGTAAAGCCTTTAACCAGTCCTCACACCTTACTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGGTTAATTCTCGACAACACTTGAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCAAAGCCTTTAACCATTCCTCACACCTTGCTACACATAAGGTAATTCATACTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATAAAGCATTTTTCAGAAAATCACATTTTGGAAACACATATTGTATCACATTCCGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGAACATAAGAAATTCATACTGGAGAGAAACCCTACACATGT---
provided by the submittor.

provided by the submittor.

This sequence will be replaced
by the finished sequence as soon as it is available
the accession number will be preserved.

75796: contig of 75796 bp in length
75797 75896: gap of unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTTGATTGTGCATAAGATAATTCATACTAAAAAAAACCTATAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATGCTGGTGAGAAATCTTAGAAATGTGAAGAATGTAACAAAACCTTTAAAAAGTTGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTTCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTAAAAGATGTAACAGTGATTTTGAAAACACTTCAAAGTTTTCTAAACATAAAAAGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACCAGTCCTCAAACCTTACTGGACATAAGAAATTCATACTGGTGAGAAACTCTACAAA
                                                                                                                                                                                                                                                                                                                                          Stanford Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HTG 08-JI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -GAAGAATGT
                                                                                                                                                                                                                                  2800 Mitchell
                                                                                                                                                                                                                                                                        Center.
                                                                                                                                                                                                                                                                                                                                            Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                Ś
                                                    밁
                                                                                   Š
                                                                                                                            멍
                                                                                                                                                            Š
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best
```

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                               49493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49667
                                                                                                                              49313
                                                                                                                                                                                                                                                                                               49433
                                                                                                                                                                                                              49373
                                                                                                                                                                                                                                                     1026
                                                                                                                                                                                                                                                                                                                                                                                                                        906
                                                                                                                                                                                                                                                                                                                                      966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         estimation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAATGTGGCAAAGCTTTTAACCAGTCCTCAATCCTTACTACACATAAGAGAATTCATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCATCACGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                      GATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTGAACATAAGAAAATTCATACTGGAGAAACCCTACACATGT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGAGAAATCCTACAAATGTGAAGAATGTGGCAAAGCTTTCTATCGATCCTCAAAACTT
                                                                                                                                                                                                                                                                                                                                    AAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGGTTAATTCTCGACAACACTTGAAAAAGA 1025
                                                                                                                                                                                                                                                                                                                                                                               GGCAAAGCCTTTAACCATTCCTCACACCTTGCTACACATAAGGTAATTCATACTGGAGAG
CATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTCCAA 1262
                                           CCTAAAAGATGTAACAGTGATTTTGAAAACACTTCAAAGTTTTCTAAACATAAAAAGAAAT
                                                                              TGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAA 1202
                                                                                                                           AACCAGTCCTCAAACCTTACTGGACATAAGAAAATTCATACTGGTGAGAAACTCTACAAA 4925
                                                                                                                                                                TATAAACATCAATCTTTAA----GACATCATATATTATCTGTTCATGAAAAAACATTAACG
                                                                                                                                                                                                            CATAAGAGAATTCATACTGGAGAGAAACCCTACCAATGTGAAAAATGTGGCAAAGCTTTT
                                                                                                                                                                                                                                                   CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTT 1085
                                                                                                                                                                                                                                                                                               AAACCCTACCAATGTGAAGAATGTGGTAAAGCCTTTAACCAGTCCTCACACCTTACTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         75897
138072
138172
157900
158000
166059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.8%; ilarity 50.6%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/chromosome="19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="RP11-189C24"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .169500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     138071: contig of 62175 bp in length
138171: gap of unknown length
157899: contig of 19728 bp in length
157999: gap of unknown length
166058: contig of 8059 bp in length
166158: gap of unknown length
166158: gap of unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Consensus quality: 165586 bases at least Q40 Consensus quality: 165891 bases at least Q30 Consensus quality: 166156 bases at least Q20 Estimated insert size: 166995000; agarose-fp estimation Estimated insert size: 166687; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Project Information
Center Project Name: 479013
Center clone name: RP11-189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Web site: http://www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center: Joint
Center Code: C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Quality coverage:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Quality coverage:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 99.4; DB 2;
Pred. No. 1.1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches 281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genome Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RP11-189C24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0 in Q20 bases;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 169500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -GAAGAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   785
                                                                                                                                                                                                                                                                                                       49374
                                                                                                                                                                                                                                                                                                                                                                                                                                 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  905
                                                                                                                                                                                                                       49314
                                                                                                                                                                                                                                                                                                                                                                                          49434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49608
                                                      49194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
```

```
8
                                                                                                                    В
                                                                                                                                                                    Ŋ
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                  B,
                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
AK122869
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 273; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
1766 CAAAGCCTTTAAACCATTCCTCACACCTTGCTACACATAAGGTAATTCATACTGGAGAGAA 1825
                                                                                                                                                                                                                         1652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isogai, T. and Yamamoto, J.

Direct Submission

Submitted (15-JUL-2003) Takao Isogai, FLJ Project(HRI Team); 2-6-7

Kazusa-Kamatari, Kisarazu, Chiba 292-0818, Japan

(E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)

NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology (RAB); cDNA library Construction: Holix Research Institute (HRI) (supported by Japan CONSTRUCTION: PARAMETER (RAB) (supported by Japan CONSTRUCTION: PARAMETER (RAB))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key Technology Center etc.); 5'- & 3'-end one pass sequencing: RAB, HRI, and Biotechnology Center, National Institute of Technology and Evaluation; clone selection for full insert sequencing: HRI and RAB; annotation: HRI and RAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shimizu, F., Wakebe, H., Ono, T., Hishigaki, H., Watanabe, T., Ozaki, K., Sugiyama, T., Irie, R., Ocsuki, T., Sato, H., Wakamatsu, A., Ishii, S., Yamamoto, J., Isono, Y., Kawai-Hlo, Y., Saito, K., Nishikawa, T., Kimura, K., Yamashita, H., Matsuu, K., Nakamura, Y., Sekine, M., Kikuchi, H., Kanda, K., Wagatsuma, M., Murakawa, K., Kanehori, K., Kakuchi, B., Oshima, A., Sugiyama, A., Kawakami, B., Suzuki, Y., Sugano, S., Nagahari, K., Masuho, Y., Nagai, K. and Isogai, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NEDO human cDNA sequencing project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tanigami, A., Pujiwara, T., Shibahara, T., Goto, Y., Hirao, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AK122869.1 GI:34528067 cligo capping; fis (full insert sequence)
                                                                                                                                                  GCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGA 907
                                                                                                                                                                                                       AGAGAAATCCTACAAATGTGAAGAATGTGGCAAAGCTTTCTATCGATCCTCAAAACTTAC 1711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AKI22869 2237 bp
Homo sapiens cDNA FLJ16502 fis, cl
similar to Zinc finger protein 43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
Homo sapiens
                                               TAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAAAA 967
                                                                                                          TGAACATAAGAAATTCATACTGGAGAGAAACCCTACACATGT-----
                                                                                                                                                                                                                                         AAAGTATTATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGA 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATGCTGGTGAGAAATCTTAGAAATGTGAAGAATGTAACAAAACCTTTAAAAGTTGTCAC 49134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACT 1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 2237)
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="brain"
/clone_lib="FEBRA2"
                                                                                                                                                                                                                                                                                                                                                                                                                                        note="cloning vector: pmE18SFL3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dev stage="fetal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone="FEBRA2006664"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .2237
                                                                                                                                                                                                                                                                                                                                         4.8%;
                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                              Score 98.2; DB 9;
Pred. No. 3.6e-06;
0; Mismatches 243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clone FEBRA2006664, moderately
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                              Length 2237;
                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                    -GAAGAATGTGG 1765
                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRI 09-SEP-2003
                                                                                                                                                                                                                                                                                                         Gaps
```

```
멍
                                      Ş
                                                                         뫄
                                                                                                        Ś
                                                                                                                                              片
                                                                                                                                                                           Ş
                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                              Š
       2126
                                                                            2066
                                                                                                             1205
                                                                                                                                                                                 1145
                                                                                                                                                                                                                    1946
                                                                                                                                              2006
                                                                                                                                                                                                                                                                                                                            1028
                                                                                                                                                                                                                                                      1088
                                                                                                                                                                                                                                                                                         1886
                                                                                                                                                                                                                                                                                                                                                             1826
                                                                                                                                                                                                                                                                                                                                                                                                968
                                                                                                                                   TAAAAGATGIAACAGTGATTTTGAAAACACTTCAAAGTTTTTCTAAACATAAAAGAAATTA 2065
                                                                                                                                                                      ТАЛАСАЛТСТАЛТАЛАСТТТТСАСТССВАССТТСЛАЛАТТАВСАСАЛАЛТАЛАТТАЛАЛСА 1204
                                                                                                                                                                                                                                    TAPACATCATATCTTTAP---GACATCATATATCTGTTCATGABABABACATTBACGTG 1144
TTGATTGTGCATAAGATAATTCATACTAAAAAAAAAACCTATAAGT 2170
                               TTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACT 1309
                                                                 TGCTGGTGAGAAATCTTAGAAATGTGAAGAATGTAACAAAACCTTTAAAAAGTTGTCACAC 2125
                                                                                             TCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAAATTTTCCAAAC 1264
                                                                                                                                                                                                         CCAGTCCTCAAACCTTACTGGACATAAGAAATTCATACTGGTGAGAAACTCTACAAACC
                                                                                                                                                                                                                                                                                                           TGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTA 1087
                                                                                                                                                                                                                                                                              TAĀGĀGAĀTTCATĀCTGGAGAGAACCCTACCAĀTGTGĀĀĀĀĀĀTGTGGCAĀĀGCTTTTAĀ
                                                                                                                                                                                                                                                                                                                                                    ACCCTACCAATGTGAAGAATGTGGTAAAGCCTTTAACCAGTCCTCACACCTTACTAGACA
                                                                                                                                                                                                                                                                                                                                                                             ACCATTCCATTGTTCAGTGTGTGAAAGGGGGTTAATTCTCGACAACACTTGAAAAGACA 1027
                                                                                                                                                                                                          2005
                                                                                                                                                                                                                                                                                1945
                                                                                                                                                                                                                                                                                                                                                     1885
```

Search completed: July 28, 2004, 17:19:28 Job time: 8124 secs

,			
	*		

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic search, using sw model
      32.
44...
77...
77...
112...
112...
113...
114...
115...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
116...
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length: 0 length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27513289 seqs, 14931090276 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 July 28, 2004, 14:00:52; Search time 5411 Seconds (without alignments)
11368.710 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-831-804-1
2060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctttattaggaagattggct.....gacatattactctcttaatg 2060
                                                                                                                                                                                                                                                                                                                                                                                     em_htc:*
gb est1:*
gb est2:*
gb htc:*
gb htc:*
gb_est4:*
gb_est4:*
gb_est5:*
gb_est6:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Copyright
                      em_gss_hum:*
em_gss_inv:*
em_gss_pin:*
em_gss_yrt:*
em_gss_vrt:*
em_gss_mam:*
em_gss_mam:*
em_gss_mam:*
em_gss_mac:*
em_gss_pro:*
em_gss_pro:*
em_gss_pro:*
em_gss_phg:*
em_gss_vrl:*
em_gss_vrl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        em_estmu:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     em_estba:*
em_esthum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  em_estro:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               em_estov:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           em_estin:*
gb_gss2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55026578
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

0 0 4 3 2 1	Result
182.2 167.6 98.2 97.8	Score
8.8 8.1 4.8	% Query Match Length DB
	length
28 11 11	BB
BZ298000 CNS06MMP AK032220 BC047646	SUMMARIES
BZ298000 CG3957.f1 AL405671 T7 end of AK032220 Mus muscu BC047646 Homo sapi	Description

(נ	()	r	0 0	1						a		Ω				a		a																			a	
ŧ	A 4	۱. د د	7 4) H	4 6	, U	ω ω	37	36	35	34	S)	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	σ	υī
	р Л О	0 0	9 0	0 0	ασ. 	, o	86.4	0	9	9	9	σ	σ	Q	87	87	7	7		7	7	7	7	1	æ	æ	88.6	œ	œ	89.2	9	0	90.4	Ó	91	91	92	N	٠	97.6
					2.2		4.2		4.2				4.2				-		4.2	4.2	4.2	4.3	4.3	4.3	4.3	•	•	٠	•				٠			4.4		4.5	. 5	4.7
107	2001	2 0	667	557	523	2791	874	1098	694	1906	897	860	705	521	842	660	907	687	579	1392	1200	1201	832	895	1084	2622	2330	2174	535	3609	604	2698	2694	2253	1163	593	591	2672	1101	745
7	4 6	2	14	T	14	11	13	13	12	11	13	28	28	28	13	14	<u>_</u> 3	28	28	29	13	13	13	13	13	1	11	11	9	片.	10	ㅂ	11	11	13	28	28	11	29	9
BX458623	٠.	AG149704	CF135920	176	CA874049	BC020045	BU171453	BX377526		AK013043	BQ431141	A0749175	AQ194282	AO475626	BU507408	CD770140	BO423752	AQ389266	AQ347265	5750	BX437758	BX355654	BX437291	BU195416	BX456765	AK033958	BC037426	AK033001	AL705393	BC032590	BE161630	BC037782	BC022527	BC028252		B99387	513	9	003	AU123448
BX458623 BX458623	7347 AGEN	4 Pan	0		874049 K0929	5	1453	77526 BX377526	6026		BO431141 AGENCOMPT	MO749175 HG 5575 N	PPCT11-6	CITELIA		CD770140 ACENCOUNT		A0389266 BDCTT1-1E	A0347265 RBCT11-11	CG757503 P052-4-C0	BX43775	BX35565		BU195416 AGENCOURT		M L	,, ,	٠,	TOURS DESTRUCTED SALT	BC030500 Comp Com:			in one	BC008050 Mile milecii	7-3011-17	TTLEDED CO.	A0002138 CIT-HSB-3	9 1	63921	AU123448 AU123448

ALIGNMENTS

MEDLINE PUBMED COMMENT REFERENCE AUTHORS SOURCE ORGANISM ACCESSION VERSION KEYWORDS RESULT 1 BZ298000/c LOCUS DEFINITION TITLE JOURNAL Contact: Wong S
Department of Genetics, in
Trinity College Dublin
Dublin 2, Ireland
Tel: 353 1 6082319
Fax: 353 1 6798558
Email: swong@tcd.ie Candida glabrata
(Candida glabrata
(Candida glabrata
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; mitosporic Saccharomycetales; Candida.

1 (bases 1 to 628)
Wong, S., Fares, M.A., Zimmermann, W., Butler, G. and Wolfe, K.H.
Evidence from comparative genomics for a complete sexual cycle in the 'asexual' pathogenic yeast Candida glabrata
Genome Biol. 4 (2), R10 (2003) Class: plasmid ends 12620120 22508158 SSD 628 bp DNA linear GSS 31-OCT-2003 GG3957.f1 Candida glabrata Random Genomic Library Candida glabrata genomic clone CG3957, genomic survey sequence. BZ298000 BZ298000.1 GI:24440936 Smurfit Institute GSS 31-OCT-2002

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Βb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                 REFERENCE
                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                    CNS06MMP/c
                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                     VERSION
                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                    AUTHORS
                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1043
                                                                                                                                                                                                                                                                                                                                                                      1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      328
                                                                                                                                                                                                                                                                                                                                                                                                       148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       348;
                                                                                                                                                                                                                                                                                                                                     88
                                                                                                                                                                                                    959 bp DNA linear GSS 17-JUN-20 T7 end of clone AUOAA005F10 of library AUOAA from strain CBS 3082 of Saccharomyces kluyveri, genomic survey semience AL405671
Souciet, J.L., Alg.e, m., Alg.e, m., Casaregola, S.,
Bolotin-Fukuhara, M., Bon, E., Brottier, P., Casaregola, S.,
de-Montigny, J., Dujon, B., Durrens, P., Lepingle, A., Llorente, B.,
Malpertuy, A., Neuveglise, C., Ozier-Kalogeropoulos, O., Potier, S.,
Malpertuy, A., Toffano-Nioche, C., Wesolowski-Louvel, M.,
                                                                                                  Saccharomyces kluyveri
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetaes;
Saccharomycetales; Saccharomycetaceae; Saccharomyces.
                                                               1 (bases 1 to 959)
Souciet, J.L., Aigle, M., Artiguenave, F., Blandin, G.
                                                                                                                                                                       GSS
                                                                                                                                                                                   AL405671
AL405671.1 GI:12168715
                                                                                                                                                    Saccharomyces kluyveri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGAGCAACATTTAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATACGATAATTGTGACAAGGCCTTTACAAGGCCGTCCTTGCTCACAGAACACCAGAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    да GACATCATATATTATCTGTTCATGAAAAAACATTAACGTGTAAACAATGTAATAAAGT 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTATAAACATCAATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAAGACATGAAATCACCCATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAAAACCATTCCATTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGATAAAGCATTTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAATGCTTATCAATGTACCTTCAGTGTTTGTTCTAAGAGTTTCAAAAACATGGTCTGCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGGGCTCATATTTTAGCAGTTCATTTACAAAGTCTAAAATGTCACGAATGCAACAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAAATCGTTCAATTGTGAATATGAAGGTTGTAATGAGAGTTTCTACAAGCACCCTCAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTTTGTGGGAAGGGGCTAATTACTAGGCAACAACTGAAACGACATGAGGTAACTCACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAAGATCCACTTAGAGAGACACTTATACACACAGATGAAAGACCGTTTTATTGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ---AGTGCATCTTGGGAGGAAACCTTGGAAATGTAATCAATGTGAAAGTTCATTTACTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                  ACAATTTCATATAAAACAACTGCATCCAAAACTTAAATGTCCTAAATGTGGTAAAGGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITCACTCGACCTTCAAAATTAGCACAACATAAATTAAAACATCATGGTGGATCTCC---
                                                                                                                                                                                                                                                                                                                                       TGTTGGGGAAGACGGTTTAAATATGCACATGAAAATCCACGATGA
                                                                                                                                                                                                                                                                                                                                                                    TGTTGGGAAAAAGGTTTATCTTCACATATGTTAAGTCATGATGA 1381
                                                                                                                                                                                                                                                                                                                                                                                                       <u>AAGATTACATGTTAAAAATGATCATCCGAAGTTAAAATGCCCTATATGCAGTAAACCCCTG</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTTCAAAGACCTTACAGACTCAAAAATCACATAGCCAAAACACCATAATCCAGATGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTCCAAACTTGGTCAGTATT 1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
1. .628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:5478"
/clone="CG3957"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="genomic
/strain="CBS 138"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Candida"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _lib="Candida glabrata Random Genomic Library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 182.2; DB 2
Pred. No. 4.7e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches 228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        glabrata"
DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                             GSS 17-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1219
                                                                                                                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                       Š
                                                                                           밁
                                                                                                                        Š
                                                                                                                                                            망
                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                             1110
                                                                                                                                                                                                                                                               1050
                                                                                                                                                                778
                                                                                                                                                                                                                                838
                                                                                                                                                                                                                                                                                              898
                                                                                                                                                                                                                                                                                                                                                               958
                                                                                                                                                                                                                                                                                                                                                                                                930
                                                                                                                                                                                                                                                                                                                                                                                                                               324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11152884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20584719
```

```
Submitted (07-SEP-2000) Genoscope - Centre National de Sequencage, 2 rue Gaston Cremieux, CP 5706, 91057 EVRY cedex, FRANCE. (E-mail: seqref@genoscope.cns.fr - Web: www.genoscope.cns.fr)
This GSS is part of a random genomic sequencing program of thirteen yeast species: Saccharomyces bayanus var. uvarum, Saccharomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Neuveglise, C., Bon, E., Lepingle, A., Wincker, P., Arti Gaillardin, C. and Casaregola, S. Genomic exploration of the hemiascomycetous yeasts: Saccharomyces kluyveri FEBS Lett. 487 (1), 56-60 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wincker, P. and Weissenbach, J.

Genomic exploration of the hemiascomycetous yeasts: 1.

Yeast species for molecular evolution studies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               angust, Debaryomyces hansenii var. hansenii, Pichia sorbitophila, Candida tropicalis and Yarrowia lipolytica. Genomic inserts of 3 to 5 kb were prepared and both extremities were sequenced. See keywords for description of this sequence and for the sequence of the other extremity of this insert.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exignus, Saccharomyces servazzii, Zygosaccharomyces rouxii, Saccharomyces kluyveri, Kluyveromyces thermotolerans, Kluyveromyces lactis var. lactis, Kluyveromyces marxianus var. marxianus, Pichi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEBS Lett. 487 (1), 3-12 (2000)
                                                                                                                                                                                                                                                                                                                                                                    TTCAAATGTGAATATGAGGGCTGCAACGAATGTTTTTACAAGCATTCTCAACTAAGGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGTAAAGGTGTTACTACAAAGCAGCAGTTAAAAAAGACATGAGATCACACATACCAAATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u> деграва десертиватт стесва сва сва сттева в в в сатева в теся се ста сва в стте в в се стте в в стте в в се с</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACTTGGAAAGACATATGTTCACGCATTCCGATAATAAACCATTTCATTGTYCCTATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATTTGGAAACACATATTGTATCACATTCCGAAAAAAAACCATTCCATTGTTCAGTGTGT
TATCAATGTACTTACACGGCGTGCACAGAGACTTTTAAAAACCTGGACTGCTCTTCAGCAG
                                                                                                                        AGGCCATATCGTCTGCAAAACCATCTTGCAAAGCATCACAATGTGGATGTTGAAAACAAA 659
                                                                                                                                                                                CGACCTTCAAAATTAGCACAACATAAATTAAAACATCATGGTGGATCTCCTGCT-----
                                                                                                                                                                                                                                                CATACACTTTCGGTACACTTGCAGAAATTGACCTGTGAGCATTGCGGTAAAATGTTCCAA
                                                                                                                                                                                                                                                                                                     САТАТАТТАТСТБТТСАТБААААААСАТТААСБТБТАААСАТБТААТАААБТТТТСАСТ 1165
                                                                                                                                                                                                                                                                                                                                                                                                                       TTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTATAAACATCAATCTTTAAGACAT 1109
                                                            TATCAATGTGATCATCCTGGTTGTTTTAAAAATTTCCCAAACTTGGTCAGTATTACAATTT 1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 959)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PZF1 ; TFIIIA (transcripta /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="end : T7"
complement (<71. .>958)
rote="similar to Saccharomyces cerevisiae ORF YPR186c
PZF1; TFIIIA (transcription initiation factor)]"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol type="genomic DNA"
/strain="CBS 3082"
/db xref="taxon:4934"
/clone="AUOAA005F10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="AU0AA"
/note="end : T7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Saccharomyces"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 167.6; DB 2
Pred. No. 5.7e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Artiguenave, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kluyveromyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A set
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0f
                                                                                                                                                                                                                                                                  719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1049
                                                                                                                                                                                                   1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          989
                  599
```

```
JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                             TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AK032220
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΛÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
                                                                                                             JOURNAL
                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         478
Group Phase I & II Team.

Analysis of the mouse transcriptome based on functional ar of 60,770 full-length cDNAs

Nature 420, 563-573 (2002)

6 (bases 1 to 1609)

Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Calpukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozar Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukay
                                                                                                                                                                                                                                                                                                                                                                     Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Komno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                         The FANTOM Consortium and the RIKEN
                                                                                                                                                                                                                                      Nature 409,
                                                                                                                                                                                                                                                         Functional annotat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA
Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1609 bp mRNA linear HTC 18-5
Mus musculus adult male olfactory brain cDNA, RIKEN full-len
enriched library, clone:6430503015 product:MSZF33 (FRAGMENT)
homolog [Mus musculus], full insert sequence
AK032220
                                                                                                                                                                                                                                                                                            The RIKEN Genome Exploration Research Group Phase II Team and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AK032220.1 GI:26328050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .1042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AATATCTTCCATGATGGTAATATCCC 1489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAAGGTTTATCTTCACATATGTTAAGTCATGATGATGATTCTACCATGATCAAAATATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTTGTGATTATTGTGATGTGGGGAAATTTGCAAAGAAAAATGAATTAGTTGAACATTAT 1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATATAAAACAACTGCATCCAAAACTTAAATGTCCTAAATGTGTGTAAAGGTTGTGTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGAACATCATAAGGATGATATACC 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ARATGTACCATTTGTCAGCAAGTCTCTTTTGCTAAGAAGGCTGATCTTTTATCTCACTAC 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGTCTGGTCTACAGATGCACATGCGAGTCCATGACGAGGCTTTAGTAATAAAAATTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATATCAAGGCGGACCATCCCAAGTTGCACTGTAACGTATGTGGCAAAGCTTGTGTTGGT 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eutheria;
                                                                                                                                                                                                                                      annotation of a full-length mouse cDNA collection, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cloning
                                                                                                                                                                                           Genome Exploration Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   near HTC 18-SEP-2003
RIKEN full-length
    Hirozane, T.,
Kasukawa, T.,
                                                                Carninci, P.
                                                                                                                                                annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1343
                       맑
                                                       δÃ
                                                                                                     뮍
                                                                                                                                         8
                                                                                                                                                                                      뮍
                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDS
                                                                                                                                                                                                                                                                                                                                                                                            polyA_site
                                                                                                                                                                                                                                                                                       Local
                                                                                                                                              839
                                                                899
                                                                                                       581
                                                                                                                                                                                      521
```

```
polyA_signal
                                                                                                                                                                                                                                                                                                                                                               al Similarity
310; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N. Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagam, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prepare mouse tissues.
Please visit our web site for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA library was prepared and sequenced in Mouse Genome
Encyclopedia Project of Genome Exploration Research Group
Genomic Sciences Center and Genome Science Laboratory in F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yo
Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222,
Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                   ATTATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGA 898
TCAATGTGGTAAAGCCTTTACACAACACAGTCATCTCAAAATACATATGGTTACACATAC
                                                  CGATTGTGATAAAGCATTTTTCAGAAAATCACATTTTGGAAACACATATTGTATCACATTC
                                                                                                                CATTCTACAAATACATAAAAGAACACATAGTGGAGAAAACCCTATGAATGTA-----
                                                                                                                                                                                                                                     ACATACTGGAGAGAAACGCTACAAATGCAATCAATGTGATAAAGCCTATTCACGACACAG 580
                                                                                                                                                                                                                                                                                                ACGTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATC 838
                                                                                                                                                                                                                                                                                                                                                            4.8%;
ilarity 51.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
/protein_id="B627766.1"
/protein_id="B627766.1"
/db_xref="G1:26328051"
/translation="MLETYRNLNAVGYNWEDSNIEEHCESSRRHGRHERNHTGEKPYE
/translation="MLETYRNLNAVGYNWEDSNIEEHCESSRRHGRHERNHTGEKPYECN
GCKAAFTQHSHLKIHWTHTGEKPYKCNQCGKAFACHNKLQKHERTHTGEKPYKCNQCGK
QCGKAFTQHSHLKIHWTHTGEKPYKCNECGKAFARHSHLKVHKITHTGEKPYKCNQCGK
ALAYHSTLQVHQRTHTGEKPYECEQCGKAFANQSYFQVHKRIHTGEKPYKCNQCGK
ALAYHSTLQVHQRTHTGEKPYECEQCGKAFANQSYFQVHKRIHTGEKPYKCDQCGKAF
VGSSDLKRHERVHTGRETLQM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100%length, match=255)
putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /strain="C578L/6J"
/db_xref="RANTOM_DB:6430503015"
/db_xref="MGI:2395676"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note="unnamed protein product; MSZF33 | Mus musculus | (SPTR | 088251, evidence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue_type="olfactory brain"
/clone_lib="RIKEN full-length"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone="6430503015"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . .1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kawai,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kojima, Y., Kondo, S., Konno, H.,
                                                                                                                                                                                                                                                                                                                                                         Score 98.2; DB Pred. No. 1.1e-0; Mismatches
                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                        ; DB 11;
l.1e-05;
                                                                                                                                                                                                                                                                                                                                                               283;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        enriched mouse
                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1609;
                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (FRAGMENT) homo FASTY, 87.1%ID,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kouda, M.,
                                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ohsato, N.,
                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             homolog
694
                                                                                                                634
                                                                                                                                                                                                                                                                                                                                                         ů,
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
BC047646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                 MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                    TITLE
                                                                                                                         JOURNAL
                                                                                                                                                       Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Villalon, D.K., Muzny, D.M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Bickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BC047646 2647 bp mRNA linear Homo sapiens zinc finger protein 85 (HPF4, HTF1), IMAGE:4828290), with apparent retained intron.
Strausberg,R.
Direct Submission
Submitted (03-MAR-2003) National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                 human and mouse cDNA sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                     12477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTCCAAACTTGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAAATG 1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTAAAACATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAA 1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAAAAACATGAAAGAACACATACTGGAGAGAAACCTTACAAGTGTGATCAATGTAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGA 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAAAAAAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGGTTAATTCTCGACAACACTT 1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTACAAATGTAATGAATGTGGTAAAGCCTTTGCACGACACAGTCATCTCAAAGTGCATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTAACGTGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAA 1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCATTT --- TATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGAGAGAAACCTTACAAATGTAATCAATGTGGTAAAGCCTTTGCATGTCATAATAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCCTTTGTATATGĀAAGTTĀTTTACAAGTTCATAAAAAAACACATACTGGAGAGAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAGCAATGTGGCAAAGCCTTTGCAAATCAAAGTTATTTCCAAGTACATAAAAGAATACA 1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTAAATGTGGTAAAGGTTGTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCA 1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATATCATAGTACACTCCAAGTACATCAAAGAACACATACTGGAGAGAAGCCCCTATGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 2647)
                                                                (bases 1 to 2647)
                                                                                                                           Natl. Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                           U.S.A. 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -CTTACAAATGTAATCAATGTGGTAAAGCCCCTTGC
                                                                                                                           (26), 16899-16903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HTC 19-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1051
                                                                                                                                                                                                                                                                                                                                                                                                                                        뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                           8
                                                                                                        В
                                                                                                                                            8
                                                                                                                                                                                         В
                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                       Бр
                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                            1529
                                                                                                                                                                                                                                                                                                                   1026
                                                                                                                                                                                                                                                                                                                                                         1469
                                                                                                                                                                                                                                                                                                                                                                                                                                          1409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1355
                                                                                                          1649
                                                                                                                                                                                           1589
                                                                                                                                                                                                                                  1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1235
                                                                                                                                                                                                                                                                                                                                                                                                  966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dickson,
                           CATACTGGAGAGAAGCCTTACAAATGTAAAGAATGTGAAAAAAGCTTTTAACCAATCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note="Vector: pBluescript"
```

```
cDNA Library Preparation: Michael J. Brownstein (NHGRI) & Toshiyuki and Piero Carninci (RIKEN)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Sequencing Group at the Stanford Human
Center, Stanford University School of Medicine, Stanford,
Web site: http://www-shgc.stanford.ed.
                                                                                                                                                                                                                                                     Clone distribution: MGC clone distribution information can be for
through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAK Plate: 90 Row: i Column: 7
This clone has the following problem: retained intron.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Miklos Palkovits,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                       Location/Qualifiers
/tissue_type="Testis"
/clone_lib="NIH_MGC_97"
/lab_host="DH10B"
                                                                                                              /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                       organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                               (Dickson, Mark) mcd@paxil.stanford.edu
4., Schmutz, J., Grimwood, J., Rodriquez,
                                                                                      clone="IMAGE:4828290"
                                                                                                                                                                                                     .2647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                M.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                  Α.,
                                                                                                                                                                                                                                                                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CA 94
                                                                                                                                                                                                                                                                                                                                                                                                                                     Myers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shiraki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94305
```

Local Similarity hes 330; Conserv 1295 GGAGAGAAACCCTACAAATGTAAAGAATGTGGGTAAAGCTTTTAACCGATCTTCAACCCTT GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT AAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA GAATGTGGCAAAACTTTTAACCGATTCTCAACTCTTACTACCCATAAGATAATTCATACT GANAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCATCACGTCCC TGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAA 1202 GATAAAGCATTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA ACTACCCATAGAAAAATTCATACTGGAGAGAAACCTTACAAATGT-----GAAGAATGT CATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTTCCAA 1262 TGTAAAGAATGTGGTAAAGCTTTTAAACACTCTTCAACCCTTACTAAACATAAGATAATT 1708 AATCATTTCTCACACCTTACTACACATAAGATAATTCATACTGGAGAGAAACCTTACAAA TATAA----ACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAACG CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTT AMACCCTACAAATGTAAAAAATGTGGAAAAGCCTTTAACCAGTCTGCACACCTTACCACA AAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGA GGCAAAGCCTTTAAGCAGTCCTCAAACCTTACTACACATAAGATAATTCATACTGGAGAG CATGAGGTAATTCATACTGGAGAGAAACCCCTACAAATGTGAAAAATGTGGAAAAGCCCTTT Conservative 4.7%; 0 Score 97.8; DB 11; Pred. No. 9.4e-06; Mismatches 317; Length Indels 2647; 12; Gaps . 965 1354 1294 785 1085 1528 1468 1648 1588 1408 905 845 1025

```
밁
                                            δÃ
                                                                              밁
                                                                                                    Ś
                                                                                                                                    g
                                                                                                                                                             Ş
                                                                                                                                                                                               В
                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
AU123448
LOCUS
                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 328; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                    261
                                                                                                                                                                                               87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: genomics@hri.co.jp
HRI human cDNA project; 5'- & 3'-end one pass sequencing: Helix
Research Institute; cDNA library construction: Department of
Virology, Institute of Medical Science, University of Tokyo, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genomics Laboratory
Helix Research Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HRI human cDNA project (Ota,T., Wakamatsu,A., Ozawa,M., Ishii,S. Saito,K., Yamamoto,J., Nakamura,Y., Nishikawa,T., Nagai,T., Suzawi,Y., Sugano,S., Isogai,T.)
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Takao Isogai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ota, T., Wakamatsu, A., Ozawa, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia; Eutheria;
1 (bases 1 to 745)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AU123448 NT2RM2 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1532-3 Yana, Kisarazu,
Tel: 81-438-52-3975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nakamura, Y., Nishikawa, T., Nagai, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AU123448.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isogai,T
             GGCÄÄÄĞÖCTTTAAGCAGTCCTCÄAÄCCTTACTÄCÄCÄTÄAGATAATTCATACTGGAGAG
                                         GATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA
                                                                      ACTACCCATAGAAAAATTCATACTGGAGAGAAACCTTACAAATGT-----GAAGAATGT
                                                                                                 GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                              GGAGAGAAACCCTACAAATGTAAAGAATGTGGTAAAGCTTTTAACCGTTCTTCAACCCTT 206
                                                                                                                                                                                                                    GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCATCATCACGTCCC
                                                                                                                                                           AAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA
                                                                                                                                                                                      GAATGTGGCAAAACTTTTAACCGATCCTCAACTCTTACTACCCATAAGATAATTCATACT 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTGGTAAAGGTTGTGTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCATGATGA 1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAACTTAČTGAACATAAGAAAATTCATACTGGAGAGAAACCCTA---TGAATGTGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTIGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAATGTCCTAAA 1322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTGGCAAAGCTTTTAACCAGTCCTCAAATCTTACTAGACATAAGAAAAGTCATACAGA 1884
                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81-438-52-3986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens (human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Research Institute
                                                                                                                                                                                                                                                                                                                             /clone_lib="NT2RM2"
/note="Vector: pME18SFL3; mRNA from uninduced NT2 neuronal
precursor cells"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                          /cell_type="teratocarcinoma"
/cell_line="NT2"
                                                                                                                                                                                                                                                                                                                                                                                                      clone="NT2RM2000319"
                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:10948164
                                                                                                                                                                                                                                                                   4.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Primates;
                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                   Score 97.6; DB 9;
Pred. No. 2.1e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chiba 292-0812,
                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp mRNA linear | cDNA clone NT2RM2000319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ishii,S.,
                                                                                                                                                                                                                                                   314; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Suzuki,Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Japan
                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Saito, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sugano, S.
                                                                                                                                                                                                                                                  12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yamamoto,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo.
                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-AUG-2002
                                                                                                  905
                                                                                                                                                             845
                                                                                                                                                                                                                      785
                                                                      260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1825
                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
CNS0039G/c
LOCUS
ORIGIN
                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 381
                                                                                                                                                                                                                                                                                                                                                                                                            Genoscope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSD
                                                                                                                              at
```

```
Determination of this BAC-end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome Project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Gsoegawa and Paron Mammoser in Pieter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic strain y2; on bw sp, the same strain used for the BDGP's Pl and EST libraries. A more detailed description of the library
                                                                                                                                                                                                                                                                              and how to order individual BAC clones, the entire library, filters for hybridization from the BACPAC Resource Center continues for hybridization from the BACPAC Resource Center continues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (02-JUN-1999) Genoscope - Centre BP 191 91006 EVRY cedex - FRANCE (E-mail:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CNS0039G linear GSS 03-JUN-19
Drosophila melanogaster genome survey sequence TET3 end of BAC #
BACR08K10 of RPCI-98 library from Drosophila melanogaster (fruit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    fly), genomic survey sequence. AL063921 GI:4941778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Neoptera; Endopterygota; Diptera; Brach
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTGGCAAAGCTTTTAACCAGTCCTCAAATCTTACTAGACATAAGAAAAGTCAT 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATAA----ACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAAATTGTCAAGAAGCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTGGTAAAGGTTGTGTGTGGGAAAAAAGGTTTATCTTCACATATGTTAAGTCAT 1376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAACTTACTGAACATAAGAAATTCATACTGGAGAAAACCCTA---TGAATGTGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATACTGGAGAGAAGCCTTACAAATGTAAAGAATGTGAAAAAAGCTTTTAACCAATCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATCATGGTGGATCTCCTGCTTATCAATGTGATCATCCTGGTTGTTTTAAAAATTTCCAA 1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTAAAGAATGTGGTAAAGCTTTTAAACACTCTTCAACCCTTACTAAACATAAGATAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAA 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AATCATTTCTCACACCTTACTACACATAAGATAATTCATACTGGAGAGAAACCTTACAAA 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAACCATTCCATTGTTCAGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTIGGTCAGTATTACAATTTCATATAAAACAACTGCATCCAAAACTTAAATGTCCTAAA 1322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGAGGTAATTCATACTGGAGAGAAAACCCCTACAAATGTGAAAAATGTGGAAAAGCCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAACCCTACAAATGTAAAAATGTGGAAAAGCCTTTAACCAGTCTGCACACCTTACTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 1101)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submission
                                                                                                                                                                                                                                     http://bacpac.med.buffalo.edu/drosophila_bac.htm.
                                                            /organism="Drosophila melanogaster"
/mol_type="genomic DNA"
/db_xref="taxon:7227"
/clone_lib="RPCI-98"
                                     /clone="BACR08K10"
                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (fruit fly)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         National de Sequencage
seqref@genoscope.cns.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSS 03-JUN-1999
end of BAC #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                part of a (BDGP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      440
```

```
RESULT 7
BC036394
                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       / Match 4.5%; Score 92.4; DB 29; Local Similarity 17.9%; Pred. No. 0.0001; nes 122; Conservative 303; Mismatches 255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2027 ACATTATTTAACTTGACATATT 2048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   440
Strausberg, R.I., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
                                                                                                                                                                                                                                                                                                                                            BC036394 linear HTC Homo sapiens zinc finger protein 85 (HPF4, HTF1), mRNA IMAGE:5259399), containing frame-shift errors.
                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (Dases 1 to 2672)
                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                        BC036394.1 GI:23025784
                                                                                                                                                                                                                                                                                                                                 BC036394
                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGATGAAGAAGATAGTCTAGATGAAAAAAAGAAGTGATGTTAGATCAGACTCAATGTCAG 1668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WWWWATWDTWWDKWWWWATAAKTDTAWTWWRTAWRADWAGRDRGAGKRDRDAATDADGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KARRWGDDTWDRDTRKDDWDWTKWWTWWKDRADDRRWAGDADRWAWDDGAGTWWTATWWW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAAGTCATGATGATTCTACCATGATCAAAATATGGACTTGTGATTATTGTGATGTGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RKRADDKRDAADDRDDAATWTTWTTTTTRDTDDWKWKTDTWTRWAADRTWDRDDDDDRDR 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCAAAGATCAATAAAATCAT--TTACTGCTTCTTTGGAAGGTTCAAAGAGTGTTTCTAA 1726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WADADWWTWDAAADDWWADDRWDAWAWKWDDAWAWGARTADRRDWGDRAGKRGGARKRRD 801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DDDDGAGDKDDDGKGKDADDDTDGTKDDDDKDKDKWDDWDKAKGTWGDATWAWAATDWWWWG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGARATTAAATAATTTGCATGAATTAGAAACAGAGAAATTAAAAGTGGAAGAAGATGAAG 1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRRDGGRKRKDKKDRKDGDDDKKGGKKKKAAKAAKWATKWWDDWDWDKDWKWDGAKDRKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGATGATTTATTAAAGGAAACTGAAGTGAAAAATTAGAGAACCTATTAGATCAAGGAT 1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATTTGCAAAGAAAAATGAATTAGTTGAACATTATAATATCTTCCATGATGGTAATATCC 1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RATWDRIDAWWADAAWWITTDIDTDDWDKRDRRKGARRRRTTARAAWDWWTWKAWDWA 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTIATICTGAATAGTGGGAAGAAGATCAATTGTCCTAAGAATAATTGTGATAGAATGTT 1786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAGTCATTCTTAAATAGTATAGAAAAAAGAAAGTCCAGAAGGTGAACCATTGGTTAA 1906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTWTWTWWAATTATTTWTT 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAGCCAGGATGGATTTATTGCCAAATGAAACATCAGTGATTTCTCGATAATATACATT 1966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KWDWKTRADRWDRWAADTWTDARKADRDWAKARAWRARRDRARAARADRRWTTKGKTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTAGAGAATATGATTTACGTCGACATTTGAAATGGCATGATGATAATTTACAAAGAAT 1846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGTAGRKWRRTWKRRWKRRDTRWDDADADDTARDDRRRRGDDGADAGKGKKTGRKRRRD 681
                                                                                                                                                                                                                                                            (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                               HTC 19-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2:
                                                                                                                                                                                                                                                                                                                                                                                     (cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                  Ş
                                                                                                                                     맑
                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                Ŕ
                                                                                                                                                                                                                                                                                                                                       뭥
                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                        848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg, R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12477932
                                         ACCTTACAAATGTGAAGAATGTGGCAAAGGTTTTAAATGGCCCTCAACCCTTACTATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2672)
```

```
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Willalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Villalon, D.K., Muzny, D.M., Sodergren, B.J., Lu, X., Gibbs, R.A., Villalon, D.K., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R. W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences

1. Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
Tissue Proquerement: Wiklos Palkovits, M.D., Ph.D. cDNA Library Preparation: Michael J. Brownstein (NHGRI) & Toshiyuki and Piero Carninci (RIKEN) cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL) DNA Sequencing by: Institute for Systems Biology http://www.systemsbiology.org contact: amadan@systemsbiology.org Anup Madan, Jessica Fahey, Erin Helton, Mark Ketteman, Anua Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whitin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (05-AUG-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Miklos Pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                  and Michelle Whiting
                                                                                Mark Ketteman, Anuradha
```

8 Вb Š В Ş 멍

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 73 Row: a Column: 16 This clone has the following problem: frame shifted. Location/Qualifiers j. .2672 organism="Homo sapiens"

/tissue type="Brain, hippocampus"
/clone Tib="NIH MGC_95"
/lab_host="DH10B" note="Vector: pBluescript" mol_type="mRNA"
db_xref="taxon:9606" clone="IMAGE:5259399"

8 밁 Ş 밁 8 片 γ 멍 δÃ B γ д S 밁 Š 멍

GCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGA 907 ACCATTCCATTGTTCAGTGTGTGTAAAGGGGGTTAATTCTCGACAACACTTGAAAAGACA 1027 тарадсаттттсадаранатсасатттодарадсасататтотатсасаттсодарадара 967 TGAACATAAGAAAATTCATACTGGAGAGAAACCCCTATGAATGT-----AAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGA CAAAGCTTTTAACCAGTCCTCAAATCTTACTAGACATAAGAAAAGTCATACAGAAGAGAA 0 Score 92.4; DB 11; Pred. No. 6.1e-05; 0; Mismatches 191; Length Indels -GAAAAATGTGG 9 Gaps 1804 847 . 1918 1858

1978

302

```
Š
                                                              뮰
                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 8
AQ005136
LOCUS
                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                      Query Match
Best Local Similarity
Matches 256; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1205
   786 AAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AQ005136
AQ005136.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                end search page:
http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html
Seq_primer: M13-21;
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: mdadams@rigr.org
Clones are available from Research Genetics (info@resgen.com).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Mark Adams
Department of Eukaryotic Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1998)
Other_GSSs: CIT-HSP-2290017.TR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Use of a random BAC
Building (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Adams,M.D., Rounsley,S.D., Zhao,S., Field,
Golden,K., Berry,K., Granger,D., Suh,E., W
Simon,M. and Venter,J.C.
Use of a random BAC End Sequence Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     591 bp CIT-HSP-2290017.TF CIT-HSP Homo genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genomic survey sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AQ005136
                                                            GAATGTGGCAAAGCCTTCTACCATTCTTCACACCTTACTACACATAAGGTAATTCATACT
                                                                                                GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCATCATCACGTCCC 785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCATGGTGGATCTCCT 1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACTGGAGAAAAACCT 2174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAAGAATGTGGCAAAGCCTTTAACCAGTCCTCAAACCTTACTAAACATAAGAGAATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAATCCTCAAAACTTACCAAACATAAGAAAATTCATACTGGAGAGAAACCCTACACATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAAA---CATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAACGTG 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ТАААСААТСТААТАААСТТТСАСТССВАССТТСААААТТАССАСААСАТАААТТААААСА 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAAGATAATTCATACTGGAGAGAAAACCATACAAATGTGAAGAATGTGGCAAAGCTTTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTA 1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nmalia; Eutheria; (bases 1 to 591)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Institute for Genomic Research Medical Center Dr., Rockville,
                                                                                                                                   4.5%;
ilarity 52.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 838 0200
301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens (human)
                                                                                                                                                                                                                                       /cell_type="Sperm"
/clone_lib="CIT-HSP"
/note=_Vector: pBeloBAC11; Site_1: HindIII; Site_
                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                      sex="Male"
                                                                                                                                                                                                                                                                                                                         clone="2290017"
                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                           organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:3082581
                                                                                                                                                                                                                                                                                                                                    xref="GDB:7150844"
xref="taxon:9606"
                                                                                                                                      0
                                                                                                                                 Score 92; DB 28; Pred. No. 0.00017; Mismatches 225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Field, C.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20850,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
genomic cl
                                                                                                                                                                   Length 591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wible, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for Sequence-Ready Map
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bass,S., Linher,K.,
C., Shizuya,H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GSS 27-JUN-1998
ne 2290017,
                                                                                                                                   9
                                                                                                                                   Gaps
                                                              128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2038
                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
B99387
                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               븅
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   129
                                                                                                                                                                                                                                                                       Contact: Mark Adams
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850, USA
Tel: 301 838 0200
Fax: 301 838 0208
Email: mdadams@tigr.org
Clones are available from Research Genetics (info@resgen.com).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Adams, M.D., Rounsley, S.I
Golden, K., Berry, K., Gra
Simon, M. and Venter, J.C
                                                                                                                                                                                                       http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html
Seq primer: M13-21;
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B99387.1 GI:3027197
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genomic survey
B99387
                                                                                                                                                                                                                                                          end search page:
                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                              Building (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Use of a random BAC End Sequence Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CIT-HSP-2281A10.TF CIT-HSP Homo sapiens genomic clone 2281A10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B99387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATAAACAT----CAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAACG 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTT 1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATACTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATCATGGTG 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTAAACAATGTTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAA 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAATCTTACAAATGTGAACAATGTGGCAAAGGCTTTAACTGGTCTTCAACCCTTACAAAA 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTACACATAAGTTCATTCATGTTAAAGAAAAACCCTACAAATGT-----GAAGAATGT 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT 905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGAGAAGCCCTTCAAATGTGAAGAATGTGGTAAAGCTTTTAACCACCCTTCAGCCCTT 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTGAAGAATGTGGCAAAGCCTTTAACCACTCCTCAAAACTTACTATACATAAGATAATT 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATGTGTCTTCACACCTTACTACACATAAGATGATTCATACTGGAGAGAAACCCTACAAA 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATAAAAGAATTCATACTGGAGAGAAACCCTACAAATGTGAAGAATGTGGCAAAGCCTTT 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 593)
/cell_type="Sperm"
/clone_lib="CIT-HSP"
/note="Vector: pBeloBAC11; Site_1: HindIII; Site_2:
                                                                                           /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="GDB:7147044"
/db_xref="taxon:9606"
                                                            /sex="Male"
                                                                           clone="2281A10"
                                                                                                                                                                                        location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rounsley, S.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Granger, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zhao,S., Field,C.E., er,D., Suh,E., Wible,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wible, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            for Sequence-Ready Map
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bass, S., Linher, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shizuya, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSS 26-JUN-1998
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                    JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
BX414627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           돲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           788 AAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          47
                                                                                                                                                                                                                                                                                             Mammalia, Eutheria; Primates; Catarrhini; Hor 1 (bases 1 to 1163)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                      BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 9703.f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BX414627
5-PRIME,
                                                                  more information about this cluster, see
http://www.genoscope.cns.fr/
cgi-bin/cluster.ggi?seg-CSOCAP001DB06QP1&cluster=9703.f. Contact
Feng Liang Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CSOCAP001DB06QP1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                BX414627.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BX414627
                                                                                                                                                                                                                                                                  Genoscope - Centre National de Sequencage
                                                                                                                                                                                                                                                                                  Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAAGAATGTGGTAAAGCTTTTAAGTGGTCCTCAAAACTTACTGTACATAAGGTAATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAAACATCAATCTTT---AAGACATCATATATTATCTGTTCATGAAAAAACATTAACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAACATGAGATAATTCATACTGGAGAGAAACCCCTACAAATGT-----GAAGAATGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAACA 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAGTCCTCAACTCTTAGAAAACATGAGATAATTCATACTGGAGAGAAACCCCTACAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAAGATAATTCATACTGGAAAGAAACCCTACAAATGTGAAGAATGTGGCAAAGCTTTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTA 1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCATTCCATTGTTCAGTGTGTGGTAAAGGGGGTTAATTCTCGACAACACTTGAAAAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAAAGCTTTTAAGTGGTCCTCACACCTTACTAGACATAAAGTAATTCATACTGAAGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAGAAACCCTACAAATGTGAAGAATGTGGCAAAGCTTTTAGCCAGTCCTCAACCCTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCCTACAAATGTGAAGAATGTGGCAAGGCTTTTAACCATTTCTCÄGCCCTTÄGGAAACA
                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens THYMUS
Jab /mol
           /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                         Metazoa; Chordata;
Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:30649903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 91; DB 28; Length 59
Pred. No. 0.00024;
0; Mismatches 185; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ģ
                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 593;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST 13-MAY-2003
CS0CAP001YD12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                               For
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
```

```
RESULT 11
BC028252
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                    멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                   REFERENCE
                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                             TITLE
                                              JOURNAL
                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                  1345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  355
                                                                                                                                                                                                                                                                                                                                                                                                                                      595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        289;
Strausberg,R.

Direct Submission
Submitted (08-APR-2002) National Institutes of Health, Mammalian Submitted (08-APR-2002), Cancer Genomics Office, National Cancer Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                          2253 bp
Mus musculus, clone IMAGE:3674739,
EC028252
                                                                                                                   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                     HTC.
Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                               BC028252.1 GI:20380246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACATCATATATTATCTGTTCATGAAAAAACATTAACGTGTAAACAATGTAATAAAGTTT 1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGAGAGAAACCTTACAAATGT-----GAAGAATGKGGCAAAGCCTTTAAGCAGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGAGCAACATTTAAGAACCCACA
                                                                                                                                                                                                                                                                                                                                                             CCTCAAATCTTACTAGACATAAGAGRAGTCATACAGA 688
                                                                                                                                                                                                                                                                                                                                                                                              AAAAAGGTTTATCTTCACATATGTTAAGTCATGATGA 1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATATAAAACAACTGCATCCAAAACTTAAATGTCCTAAATGTGGGTAAAGGTTGTGTGGGA 1344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCAATGTGATCATCCTGGTTGTTTTAAAAATTTCCAAACTTGGTCAGTATTACAATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCACTCGACCTTCAAAATTAGCACAACATAAATTAAAACATCATGGTGGATCTCCTGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACATAAGATAATTCATACTGGAGAGAAACCTTACAAATGTAAAGGRATGTGGTAAAGCTT 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAAACCCTACAAATGTGAAAGATGTGGAAAAGCCTTTAATCATTTCTCACACCTTACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTTTATAA---ACATCAATCTTTAA 1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGGAAAAGCCTTTAACCAGTCTGCACACCTTACCACATGAGGTAATTCATACTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGACATGAAATCACCCCATACAAAGT 1047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAAACCTTACTACACATAAGATAATTCATACTGGAGAGAAACCCTACAAATGTAAAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACATTTGGAAACACATATTGTATCACATTCCGAAAAAAACCATTCCATTGTTCAGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGATAAAGCATTTTTCAGAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGAATGTGGTAAAGCTTTTAACCGATCTTCAACCCTTACTACSCATAGARGRRTTCATA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCATACTGGAGAGAAACCCTA---TGAATGTGAAAAATGTGGCAAAGCTTTTAACCAGT 651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>AATGTAAAGRATGTGAAAGAGCTTTTAACCAATCCTCAAAACTTACTGAACATAAGARAA</u>
                                                                                                   (bases 1 to 2253)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue_type="THYMUS"
/clone_Tib="Homo sapiens THYMUS"
/note="Vector: pcMVSPORT 6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoRV sites of the pcMVSPORT 6 vector.
Library was not normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           clone="CS0CAP001YD12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 91; DB 13;
Pred. No. 0.00016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches 268;
                                                                                                                   Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                   mRNA
mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                       linear
                                                                                                                     Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12;
                                                                                                                                                                                                                                                                       HTC
                                                                                                                                                                                                                                                                       20-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                        Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
```

USA

```
밁
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                    Ş
     밁
                                                  Ş
                                                                                                    뫄
                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                        γŞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
     1164
                                                                                                                                                      1010
                                                                                                                                                                                                        1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Akhter, N., Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B., Blakesley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S., Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P., Hansen, N., Ho, S.-L., Karlins, E., Kwong, P., Laric, P., Legaspi, R., Maduro, Q.L., Masiello, C., Maskeri, B., Mastran, S.D., McCloskey, J.C., McDowell, J., Pearson, R., Stantripp, S., Thomas, P.J., Touchman, J.W., Tsurgeon, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L., Young, A., Zhang, L.-H. and Green, E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clone distribution: MGC clone distribution information can be for
through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAK Plate: 65 Row: a Column: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 13386417 This clone has the following problem: frame shifted.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Ste
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tissue Procurement: Gilbert Smith,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
ATGTGATAAAGCCTTTTCACAACACTTTCAACTCCAAAATCATATAAGAACACATACTAG 1223
                                                                                                                                                                                                                                             ATCACATTCCGAAAAAAAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGGTTAATTCTCG 1009
                                               TTGTCAAGAAGCATTTTATAAACATCAATCTTTAAGACATCATATATTATCTGTTCAT-- 1127
                                                                                            ACATAGTCTCCAAACACATATAGGAATACATACTGGGGAAAAACCCCTACAAATGTAATCA 1163
                                                                                                                                              ACAACACTTGAAAAGACATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAA 1069
                                                                                                                                                                                                AACACATACCGGAGAGAACCCTTCAAATGTAATCAGTGTGATAAAGCCTTTTCTGTTAA 1103
                                                                                                                                                                                                                                                                                                                                               TACAGTGGACGATTGTGATAAAGCATTTTTCAGAAAATCACATTTTGGAAACACATATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCGACCATCATTATTAGAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAGAAGĀACĀCATACCGGĀĀGGAĀACCCTTCĀĀĀTGTAĀTCAATGTGĀTĀĀĀĠCCTTTTC
                                                                                                                                                                                                                                                                                                  TA-----ATCAATGTGATAAAGCCTTTTCACAAGACAGTACTCTTCAAACTCATAGAAG 1043
                                                                                                                                                                                                                                                                                                                                                                                                      CCGTAAACATTGTGTGCAAACCCATATAAGGATACATACTGGAGAAAAACCCCTTCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCTTCATCACGTCCCAAAAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAA 829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCCTACAAATGTAATCAATGTGATAAAGCCTTTTCAACACACAGTTCTCCTTCAAACTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTITATTCAATGAGTGAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cgapbs-r@mail
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /strain="CZECH II"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="IMAGE:3674739"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 90.4; DB 11;
Pred. No. 0.00013;
0; Mismatches 236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 2253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mammary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  be found
                                                                                                                                                                                                                                                                                                                                                    949
                                                                                                                                                                                                                                                                                                                                                                                                                                                      889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        929
```

```
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
BC022527
                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOCA?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                           REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1284 GATTCATAGTAGAAAACATACTGGAG
                                                                                    CDNA Library Preparation: Michael J. Brownstein (NHGRI) & Toshiyuki and Piero Carninci (RIKEN) CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Sequencing Group at the Stanford Human Center, Stanford University School of Medicine, Stanford, Web. Lett. 1988
                                                                                                                                                                                                                                                                                                                                                                            Submitted (01-FEB-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Miklos Palkovits,
                                                                                                                                                                                                                                                                                             NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                               Web site:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BC022527 2694 bp mRNA 1. Homo sapiens hypothetical protein LOC148206,
         Dickson, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg,R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BC022527.1 GI:18490307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MAGE:4797857),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACAACATAAATTAAAACATCATGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGAGATGCCTTACAAATGTAATCAATGTGACAAAGCCTTTTTACGACATAGAAATCTTCA 1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -GAAAAAACATTAACGIGIAAAACAATGIAATAAAGITTTCACTCGACCTTCAAAATTAGC 1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 2694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 2694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mouse cDNA sequences
1. Acad. Sci. U.S.A. 9
http://www-shgc.stanford.edu
(Dickson, Mark) mcd@paxil.stanford.edu
1., Schmutz, J., Grimwood, J., Rodrique
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                containing frame-shift errors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                    M.D., Ph.D.
      Rodriquez,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
   Α.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HTC 19-NOV-2003
      and Myers,
                                                                                                                  Genome
                                                                                                                                                                                                            Shiraki
                                                                                             94305
```

through the I.M.A.G.E. Consortium/LLNI at: http://image.llnl.g. Series: IRAK Plate: 32 Row: f Column: 2
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF analysis, Similarity but not identity to protein This clone has the following problem: frame shifted.

Clone distribution: MGC clone distribution

http://image.llnl.gov

can be found

```
RESULT 13
BC037782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                             REFERENCE
                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                       Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local S10 Matches 258;
                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1097 GGAGAGAGCCCTTCAAATGTGAAGAATGTGGTAAAGCTTTTAACCACCCTTCAGCCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            786 AAAAAGTATATTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA
Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausmer, R.D., Collins, F.S., Wagner, L., Shemmen, C.M., Schuler, G. Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K. Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
                                                                                                                                                                                                                                                                                                    אניטאיזיזאט 2698 bp mRNA linear Homo sapiens hypothetical protein LOC148206, mRNA IMAGE: מאמר Apparent retained intron.
                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 2698)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                      BC037782.1 GI:23349076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATCATGGTGGATCTCCT 1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATGTGTCTTCACACCTTACTACACATAAGATGATTCATACTGGAGAGAAACCCTACAAA 1450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATAAAGCATTTTTCAGAAAATCACATTTTGGAAACACATATTGTATCACATTCCGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAATGTGGCAAAGCCTTCTACCATTCTTCACACCTTACTACACATAAGGTAATTCATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCTTCATCACGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATACTGGAGAGAAACCT 1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTGAAGAATGTGGCAAAGCCTTTAACCACTCCTCAAAACTTACTATACATAAGATAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ТОТВАВАСВАТСТВАТАВАСТТТСАСТССВССТТСВВВАТТВССВСВВСАТВВАТТВВВВ 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ТАТРААСАТ---СЛАТСТТТАЛБАСАТСАТАТТАТСТБТТСАТБАРАЛЛАЛСАТТЛАСС 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATAGAAGAATTCATACTGGAGAGAAACCCTACAAATGTGAAGAATGTGGCAAAGCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAAATTGTCAAGAAGCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAATCTTACAAATGTGAACAATGTGGCCAAAGGCTTTAACTGGTCTTCAACCCCTTACAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGGTTAATTCTCGACAACACTTGAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTACACATAAGTTCATGCATGTTAAAGAAAAACCCTACAAATGT-----GAAGAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .2694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="Vector: pBluescript"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="IMAGE:4797857"
/cissue type="Brain, hypothalamus"
/clone lib="NIH MGC_96"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 90.4; DB 11;
Pred. No. 0.00012;
0; Mismatches 231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 2694;
                                                                                                                                                                                                                                                                                                                                 (cDNA clone
                                                                                                                                                                                                                                                                                                                                                       HTC 19-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1390
                                                                                                     .D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
멼
                                                     8
                                                                                                                           В
                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergreen, B.J., Lu, X., Gibbs, R.A., Villalon, D.K., Muzny, D.M., Sodergreen, B.J., Lu, X., Gibbs, R.A., Villalon, D.K., Mitting, M., Madan, A., Young, A.C., Shevchenko, Y., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schneroh, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences
1102 GGAGAGAAGCCCTTCAAATGTGAAGAATGTGGTAAAGCTTTTAACCACCCTTCAGCCCTT 116
                                                  786 AAAAAGTATTATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTA
                                                                                                                                                                                                                                                      258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov series: IRAK Plate: 70 Row: g Column: 16 This clone was selected for full length sequencing because it passed the following selection criteria: Similarity but not identity to protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield, Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin, Letticia Hislao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parryaneh Saeedi, Jacqueline Schein, Duane Smailus, Michael Smith, Lorraine Spence, Jeff Stott, Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy, George Yang, Scott Zuyderduyn, Marco Marra.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (16-SEP-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA Sequencing by: Genome Sequence Cent. BC Cancer Agency, Vancouver, BC, Canada info@bcgsc.bc.ca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This clone has the following problem: retained intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Toshiyuki and Piero Carninci (RIKEN) cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA Library Preparation: Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22388257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12477932
                                                                                                                                                                                          GAAAGTGACGAAACCAAATCGATATCATCTTTAATATCTTCTTCTTCTTCATCACGTCCC 785
                                                                                                                              GAATGTGGCAAAGCCTTCTACCATTCTTCACACCCTTACTACACATAAGGTAATTCATACT 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 2698)
                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue type="Brain, hypothalamus"
/clone_lib="NIH MGC_96"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:9606"
/clone="IMAGE:4797729"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .2698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                       'note="Vector: pBluescript"
                                                                                                                                                                                                                                                                                        4.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genome Sequence Centre,
                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                          Score 90.4; DB 11;
Pred. No. 0.00012;
0; Mismatches 231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J. Brownstein (NHGRI) &
                                                                                                                                                                                                                                                                                                                      Length 2698;
                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                             9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Myers, R.M.
                                                                                                                                                                                                                                                             Gaps
                                                                         845
```

```
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 14
BE161630
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ДЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1516
                                                                                                                                                                          Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=&t2=MR3-HT0446-260
300-201-f06&t3=2000-03-26&t4=1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R., Magai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstein,A., deOliveira,F.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                          Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BE161630.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE161630 604 bp mRNA linear
MR3-HT0446-260300-201-f06 HT0446 Homo sapiens cDNA,
BE161630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                              10737800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATACTGGAGAGAAACCT 1533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATCATGGTGGATCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTGAAGAATGTGGCAAAGCCTTTAACCACTCCTCAAAACTTACTATACATAAGATAATT 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGTGTCTTCACACCTTACTACACATAAGATGATTCATACTGGAGAGAAACCCTACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATAAACAT---CAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGAAATCACCCATACAAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATTT 1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAATCTTACAAATGTGAACAATGTGGCAAAGGCTTTAACTGGTCTTCAACCCTTACAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTACACATAAGTTCATTCATGTTAAAGAAAAACCCTACAAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATAGAAGAATTCATACTGGAGAGAAACCCTACAAATGTGAAGAATGTGGCAAAGCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAACCATTCCATTGTTCAGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAA 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGT
                                                                                                                                                           primer: puc 18 forward
                                                                                                                                        quality
                                                                                                                                                                                                                                                                                 +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
organism="Homo sapiens"
/mol type="mRNA"
/db xref="taxon:9606"
/dev stage="Adult"
/clone_lib="HT0446"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eutheria;
1 to 604)
                                                                                                                 ity sequence stop: 583.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:8624351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                               U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (7),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                              01509-010,
                                                                                                                                                                                                                                                                                                                                              Sao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 21-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGAATGT
                                                                                                                                                                                                                                                                                                                                              Paulo-SP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1215
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
BC032590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
            Strausberg, R. L., Feingold, E. A., Grouse, L. H., Derge, J. G.,
Klausner, R. D., Collins, F. S., Wagner, L., Shenmen, C. M., Schuler, G. D.,
Altschul, S. F., Zeeberg, B., Buetow, K. H., Schaefer, C. F., Bhat, N. K.,
Hopkins, R. F., Jordan, H., Moore, T., Max, S. I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A. A., Rubin, G. M., Hong, L.,
Stapleton, M., Soares, M. B., Honaldo, M. F., Casavant, T. L.,
Scheetz, T. E., Brownstein, M. J., Usdin, T. B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N. A., Peters, G. J.,
Abramson, R. D., Mallahy, S. J., Bosak, S. A., McBwan, P. J.,
Worley, K. C., Hale, S., Garcia, A. M., Gay, L. J., Hulyk, S. M.,
Villalon, D. K., Muzny, D. M., Sodergren, E. J., Lu, X., Gibbs, R. A.,
Fahey, J., Halton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Fahey, J., Halton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Fahey, J., Halton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Fahey, J., Halton, E., Ketteman, M., Madan, A., Rodrigues, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BC032590
BC032590.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGACATAGGAGAATTCATACTGGAGAGAAACCGTACAAATGTAAGGT-----TTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCATGGTGGATCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAATGAATGTGGCAAGGTTTTTAATTGAAAATCAAACCTTGAACATCATCATAGAGTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ТАРАСЛАТGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAACA 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCACAAATCAAACCTTGCATGTCATAGACTTCATACTGGAGAGAACCTTACAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAACGTG 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAAATCACCCATAC---AAAGTCATTTAAATGTACATTTGAAAATTGTCAAGAAGCATT 1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCATTCCATTGTTCAGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGACA 1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAAGGCTTTCAGACGTGATTCACACCTGGCACAACATATTGTAATTCACACTGGAGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGAGAAACCTTACAAATGTGAAGAATGTGACAAAGTTTTTAGTCGCTAATCACACCTTGA 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTTACAAGTGTAATGAGTGTGGCAAGACCTTTGTTCAAAATTCATCTCTTGTAATGCA
                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 3609)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.3%;
ilarity 53.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Organ: head_neck; Vector: puc18; Site 1: SmaI; Site 2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tissue mRNA and cDNA amplification were performed under
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:21619671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3609 bp mRNA linear clone IMAGE:5502691, containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 89.2; DB 10;
Pred. No. 0.00044;
0; Mismatches 193;
Madan, A.,
Young, A.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                frame-shift
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 215
```

망 S

밁 δõ 뮍 8

뫄 8 Ş 뭥 S 뮍 Š 片 S

뮍

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 234; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
               968
                                                                                                                                       908
                                                                            701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 69 Row: g Column: 20
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 13430873
This clone has the following problem: frame shifted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Akhter, N., Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B., Blakesley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S., Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P., Hansen, N., Ho, S.-L., Karlins, E., Kwong, P., Laric, P., Legaspi, R., Maduro, Q.L., Masiello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C., McDowell, J., Pearson, R., Stantripop, S., Thomas, P.J., Touchman, J.W., Tsurgeon, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: National Institutes of Health Intramural
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bouffard,G.G., Blakesley,R.W., Touchman,J.W., Green,E.D., Dickson,M.C., Rodriguez,A.C., Grimwood,J., Schmutz,J., Myers,R.M., Butterfield,Y.S., Krzywinski,M.I., Skalska,U., Smailus,D.E., Schnerch,A., Schein,J.E., Jones,S.J. and Marra,M.A. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Web site: http://www.nisc.nih.gov/Contact: nisc_mgc@nhgri.nih.gov
Rkhter,N., Ayele,K., Beckstrom-Ste
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIH-MGC Project URL:
Contact: MGC help des
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (06-JUN-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Young, A., Zhang, L.-H. and Green, E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .2477932
ACCATTCCATTGTTCAGTGTGTGGTAAAGGGGTTAATTCTCGACAACACTTGAAAAGACA 1027
                                                                            CAAGGCTTTCAGACGTGATTCACACCTGGCACAACATATTGTAATTCACACTGGAGAGAA
                                                                                                                                                                                           AAGACATAGGAGAATTCATACTGGAGAGAAACCGTACAAATGTAAGGT-----TTGTGA
                                                                                                                                                                                                                                               GCAACATTTAAGAACCCACAGTAATGATCGACCGTATAAATGTACAGTGGACGATTGTGA 907
                                                                                                                                 TAAAGCATTTTTCAGAAAATCACATTTGGAAACACATATTGTATCACATTCCGAAAAAAA 967
                                                                                                                                                                                                                                                                                                                   AGAGAAACCTTACAAATGTGAAGAATGTGACAAAGTTTTTAGTCGCTAATCACACCTTGA
                                                                                                                                                                                                                                                                                                                                                                    AAAGTATATTTGCACATATGAAGGGTGTGATAAAGCCTATAATCGACCATCATTATTAGA 847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 3609)
                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="Eye,_retinoblastoma"
/clone_Tib="NIH_MGC_67"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clone="IMAGE:5502691"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          desk
                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://mgc.nci.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 89.2; DB 11;
Pred. No. 0.00015;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                 193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 3609;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                 9.
                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                         760
                                                                                                                                                                                              700
                                                                                                                                                                                                                                                                                                                646
                                                                                                                                                                                                                                                                                                                                                                                                                                 N
```

맑

Š

밁 8

761

ACCTTACAAGTGTAATGAGTGTGGCAAGACCTTTGTTCAAAATTCATCTTCTTGTAATGCA

멂 8 В δÃ

```
뮍
                       Š
                                                     В
                                                                              Š
                                                                                                             В
                                                                                                                                   Š
                                                                                                                                                                                        8
吊
1001
                            1205
                                                                                  1145
                                                                                                                                       1085
                                                                                                                                                                                              1028
                                                                                                              881
                                                                                                                                                                     821
                                                        941
                                                                                                                                                                                        TGAAATCACCCATAC---AAAGTCATTTAAATGTACATTTGAAAAATTTGTCAAGAAGCATT
                            TCATGGTGGATCTCCT
                                                                                 TAAACAATGTAATAAAGTTTTCACTCGACCTTCAAAATTAGCACAACATAAATTAAAACA 1204
                                                                                                                                                                  TATCGGAGAAAACCT
                                                        TÄÄTGÄÄTGTGGCAÄGGTTTTTÄÄTTGÄÄÄÄATCÄÄÄCCTTGÄÄCÄTCÄTCATÄGÄGTTCÄ
                                                                                                              TCACAAATCAAACCTTGCATGTCATCATAGACTTCATACTGGAGAGAAACCTTACAAGTG
                                                                                                                                      TTATAAACATCAATCTTTAAGACATCATATATTATCTGTTCATGAAAAAACATTAACGTG 1144
1016
                            1220
                                                                                                              940
                                                        1000
                                                                                                                                                                                               1084
```

time completed: July 28, ne : 5418 secs 2004, 18:49:46

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Listing first 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Word size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
         10
11
12
13
13
14
14
16
16
17
17
18
22
22
23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB
BG
                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ı.
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
         00000000000000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                     Query
Match
         87654321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  412
1 M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OLIGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1586107 segs, 282547505 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-831-804-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          July 22,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MSESDETKSISSLISSSSSS.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Geneseq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         geneseqp2000s:*
geneseqp2001s:*
geneseqp2002s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              geneseqp2004s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           geneseqp2003as:*
geneseqp2003bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     geneseqp1980s:*
geneseqp1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        satisfying
                                                                                                                                                                                                                                                                                                                                                                                                       Length
       2004, 16:48:02; Search time 54 Seconds (without alignments) 2155.733 Million cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _29Jan04:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                       DΒ
                   ADE57980
ADE57984
ADE607328
ADE60728
ADD607499
ADD407889
ADD40788
AAE35866
ABG35866
ABG35866
ABG35866
                                                                                                                                                                                                                 ABP64928
ADA55380
ABP28933
ADD47645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chosen
                                                                                                                                                                                                                                                                               AAU30387
AAB57179
                                                                                                                                                                                                                                                                                                            ABB57056
ABG19930
AAU30108
                                                                                                                                                                                                                                                                                                                                                       AAY93316
ABP73656
                                                                                                                                                                                                                                                                                                                                                                                                       ID
       ABP64829
                                                                                                                                                                                                      ADE60447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . PLVKKARMDLLPNETSVISR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1586107
                 Aau30109
Abb12356
                                              Aae35866
Abg18955
                                                                            Aae35859
Add40789
Add40788
                                                                                                                                                     Add47645
Ade60447
Ade57980
Ade57984
Ade60732
                                                                                                                                                                                                                                                              Aab57179
Abp64928
                                                                                                                                                                                                                                                                                           Abg19930
Aau30108
Aau30387
                                                                                                                                                                                                                                                                                                                                      Aay93316 A transcr
Abp73656 Candida a
Abb57056 Mouse isc
                                                                                                                        Abu07499
                                                                                                                                        Ade60728
                                                                                                                                                                                                                                 Abp28933
                                                                                                                                                                                                                                                 Ada55380
                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        updates/sec
Novel hum
Novel hum
Novel human pro
Human pro
Streptoco
Human Pro
Human Homan Homan Homan Homan Homan
Human Homan Homa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             412
```

Claim 12; Page 35-36; 45pp; French.

New nucleic acid encoding Candida albicans transcription factor, e.g. in screening for antimycotic agents and for immunization.

useful

antibodies,

The present sequence represents a Candida albicans transcription factor, designated CATFIIIA. The polypeptide is a DNA-binding protein, which is involved in initiating transcription of the ribosomal RNA 58 gene. The polymucleotide is used to screen for its specific inhibitors, potentially useful as antimycotic agents, to raise an antibody response that is protective against fungal infection and to raise antibodies. Such

as well as the polypeptides and polynucleotides are used

in

X	Y PI	XX A	Y PR	YY F	¥ 8 \$	X IZ	XHHHH	FH A	88	X	X E	X II	z a s	RESI AAY! ID															
WPI; 20 N-PSDB;	Bordon-Pallier	(HMRI)	10-NOV-1998	09-NOV-1999	18-MAY-2000	WO200028037-	Misc-dif		Candida	Transc: ribosom	A tran	04-SEP-2000	AAY93316	RESULT 1 AAY93316 ID AAY93316		45	443	42	40	3 G 9 8	37	9 G	ω μ 4. μ	32	ωú	3 29 0	28	27 27	3
2000-376549/32 B; AAA15398.	·Pallie	HOECHST	1998;	-1999;	-2000.	28037-A1	ifference	h	a albicans	Transcription ribosomal RNA	transcription	-2000	16;			00 (00 00	00 0	00	သော	000	ο φ	w w	ω	ωu	ο ω	9	ωv	>
549/32. 398.	Ψ,	ST MARION	98FR-	-0M66		1.	/note= /note= /note=		ans.	factor; 58 gene	on factor	(first		standard;]								2.2							
	Camier .		98FR-00014147	99WO-FR002739			ce= "Ser	ation/Q			tor des	entry)		protein;								830 5							
	S, Sentenac	ROUSSEL.	47.	39.			r encoded by r encoded by	Location/Qualifiers		CATFIIIA; DNA-binding fungal infection.	designated CATFIIIA			; 412 AA.	ALIGNMENTS							ABB04815						ABG19932	
	Α;						CTG"			nding protein;	IIIA.				NTS														
																Ade58420	Aam85534	Abg53963 Abg42092	Aam72277	Abo13305	Abo12946	Abb04815	Aay67598	Adb85263	Aag32376	Aag38042	Aau30388	Abg19932	
																Rat Prote	Human	Human Human	Human	Mouse	Mouse zin	TDL 1	Huma	Mouse RNA		Arabid	Novel hum	Novel	ı

```
RESULT 2
ABP73656
ID 73657
XX ABP7
XX ABP7
XX ABP7
XX ABP7
XX ABP7
XX Fung
XX Fung
XX Sign
XX Sign
XX WO20
XX WO20
XX WO20
PN WO20
XX 29-D
PR 20-L
XX 29-D
PR 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SXSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ᅥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          compositions for diagnosing detecting polymorphisms and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fungus; yeast; tetracyclin; promoter; GRACE strain; biosynthesis; signal transduction; DNA replication; cell division; growth; proliferation; Candida albicans; fungicide; antifungal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Candida albicans essential
                                                                                                                                                                                                                                                       29-DEC-2000; 2000US-0259128P
20-FEB-2001; 2001US-00792024
22-AUG-2001; 2001US-0314050P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABP73656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABP73656 standard;
Constructing strains for identifying gene products as effective targets for therapeutic intervention, by inactivating in the strain one allele of
                                                                                                                                                        Roemer T,
                                                                                                                                                                                                                                                                                                                                                           26-DEC-2001; 2001WO-US049486
                                                                                                                                                                                                                                                                                                                                                                                                                11-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200253728-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Candida albicans
                                                                                                                                                                                                          (ELIT-)
                                                                                                         2002-566694/60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               412;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             μ
                                                                               ABZ32206
                                                                                                                                                                                                        ELITRA PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AFYKHQS1RHHI1SVHEKT1TCKQCNKVFTRPSK1AQHK1KHHGGSPAYQCDHFGCFKNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DIRRHLKWHDDNLQRIESFLNSIEKEETPEGEPLVKKARMDILPNETSVISR 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KNELVEHYNIFHDGNIFDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVBEDEEDEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QTWSVLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AFYKHQSLRHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MSESDETKSISSISSSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MSESDETKSISSLISSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DIRRHIKWHDDNIQRIESFINSIEKEETPEGEPLVKKARMDLIPNETSVISR 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KNELVEHYNIFHDGNIFDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QTWSVLQFH1KQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTM1K1WTCDYCDVGKFAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
nilarity 100.0%;
Conservative 0;
                                                                                                                                                      Jiang B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                        Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and treating fungal infections, e.g. by mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 412;
Pred. No. 0;
                                                                                                                                                              Bussey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO
                                                                                                                                                              Ή
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                              Ohlsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    412;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
```

```
a gene and placing other allele of the gene under conditional
                                                                                                      Claim 44;
                                                                                                      SEQ ID NO 7493; 167pp + Sequence Listing;
                                                                                                       English
                                                                                                              expression.
```

Cells in which both alleles of a gene are modified, comprising modifying cone allele by insertion or replacement by a cassette having an CC expressible selectable marker and modifying other allele by recombination, of a promoter replacement fragment with a heterologous crecombination, of a promoter replacement fragment with a heterologous promoter, so that expression of the second allele is regulated by the cells in which both alleles of a gene are modified. The diploid fungal colls in which both alleles modified are useful for identifying a gene that contributes to the virulence and/or pathogenicity of a fungus, a gene that contributes to the resistance of a diploid fungus to an antifungal agent that inhibits the growth of a diploid fungus and for identifying a therapeutic agent for treatment of a mammalian compound catabolism, biosynthetic, transporter, transcriptional, compound catabolism, biosynthetic, transporter, transcriptional, compound catabolism, biosynthetic, transporter, transcriptional, contribute transduction, DNA replication and cell division contributes to make the contribute transduction, but represented the ability to inhibit growth or proliferation of C. albicans cells and for treatment cannot all candida albicans protein used in the method of the invention. CC specification but is based on sequence information supplied to Derwent by the European Patent Office constructing (M1) a strain of diploid fungal modifying

Sequence 412 AA;

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                              361
                                                               301
                                                                                                                               241
                                                                                                                                                                                                181
                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                              121
361
                                                                                              301
                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                              352;
                                                                                                                                                                                                                                                                                           AFYKHQSLRHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNF 180
                                                                                                                                                                                                                                                                                                                                                  DCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQE 120
                                                                                                                                                                                                                   QTWSVLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAK 240
                      DLRRHLKWHDDNLQRIESFLNSIEKEETPEGEPLVXKARMDLLPNETSVISR
                                                                                    DSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREY 360
                                                                                                                                                 QTWSVLQFH1KQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTM1K1WTCDYCDVGKFAK
                                                                                                                                                                                                                                                               AFYKHOSLRHHILSVHEKTLTCKOCNKVFTRPSKLAQHKLKHHGGSPAYOCDHPGCFKNF 180
                                                                                                                                                                                                                                                                                                                             DCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQE
                                                               DSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREY
                                                                                                                                KNELVEHYNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEE
DLRRHLKWHDDNLQRIESFLNSIEKEETPEGEPLVKKARMDLLPNETSVISR
                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                               85.4%;
                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                Score 352;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                               Length 412;
                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                ·;
                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                    300
                                                                                                                                                                                                     240
                                                                                                                                     300
```

Š g Ś

Š 뮍 Š 밁 5 밁 Š 망

ABB57056 standard; protein;

07-MAR-2002 (first entry

Mouse ischaemic condition related protein sequence SEQ ID NO:106

RESULT 3
ABB57056
ID ABB5
XX
XX
AC ABB5
XX
DT 07-M
XX
DE Mous
XX
KW Mous
KW Vasc Mouse; ischaemia; compressive ischaemia; occlusive vasospastic ischaemia; ischaemic condition; ischaemic ischaemia;

```
ABG19930
XX
XX
AC ABG1
XX
AC ABG1
XX
DE Nove
XX
Huma
KW Huma
KW Food
XX
OS Homc
XX
OS Homc
XX
DE 11-(
XX
PR 30-P
XX
31-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                   RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes a method for examining ischaemic conditions, comprising measuring the expression levels of particular genes (1) in a test sample or determining the expression profile of a gene group in the sample comprising genes selected from (1). The method is useful for examining the ischaemic condition (e.g. compressive ischaemia, occlusive ischaemia or vasospastic ischaemia) by measuring expression levels of particular genes (AB199202 to AB19912, encoding the protein sequences in ABB57020 to ABB57374) or by determining the expression profile of gene group comprising these genes. The expression captiles or expression profiles produced by these genes are used as an indicator when screening for ischaemic condition-improving drugs or therapeutics for ischaemic diseases. AB199913 and AB199914 represent pCR primers for a mouse ischaemic condition related sequence, which are used or in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 10
 31-MAR-2000; 2000US-00540217
                          30-MAR-2001; 2001WO-US008631
                                                           11-OCT-2001
                                                                                                                                           Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                               Novel
                                                                                      WO200175067-A2
                                                                                                                                                                                                                           18-FEB-2002
                                                                                                                                                                                                                                                                                  ABG19930 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 546 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 2; Page 311-313; 2690pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Examining the ischemic condition (e.g. occlusive ischemia) by measuring expression levels of particular genes defined in the specification or by determining the expression profile of a gene group comprising these
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-MAY-2000; 2000JP-00145977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ishikawa K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYNI-) UNIV NIHON SCHOOL JURIDICAL PERSON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200188188-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus.
                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-034733/04.
                                                                                                                                                                                                                                                                                                                                                                                        100 ІККНЕІТНТК 109
                                                                                                                                                                                          human diagnostic protein #19921.
                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABI99270
                                                                                                                                                                                                                                                                                                                                                               LKRHEITHTK 514
                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Asai S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001WO-JP004192
                                                                                                                                                                                                                                                                                                                                                                                                                2.4%; 50
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Takahashi Y,
                                                                                                                                                                                                                                                                                     58
                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 10;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nagata T,
                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ÐΒ
                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 546;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ishii
                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
맑
                              Ş
                                                                                                                                       Matches
                                                                                                 Query Match
                                                                                                                                                                                                                                                               in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polymucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 200
N-PSDB;
                                                                                                                                                                                  and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic amino acid sequences of the invention. Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 20; SEQ ID NO 50289; 103pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                  ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    reaction (PCR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates sequences. (I) is uses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         biodiversity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-AUG-2000; 2000US-00649167.
                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                             uences. (I) is useful as hybridisation probes, polymeras ction (PCR) primers, oligomers, and for chromosome and c in recombinant production of (II). The polynucleotides
                                293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-639362/73
31
                                                                Similarity
9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RΤ,
                                                                                                                                     58
                              EEDEEDEED 301
                                                                                                                                     AA.
                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Liu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              G
39
                                                                               2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to isolated polynucleotide (I) and polypeptide (II)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΓY
                                                                0;
                                                                               Score 9;
Pred. No.
                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   English
                                                                               . DB
                                                                             . 7:
                                                                                             Length 58;
                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polymerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                              and gene mapping,
tides are also use
                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chain
                                                             Gaps
```

used

RESULT 5 AAU30108; AAU30108 standard; protein; 114 18-DEC-2001

0,

Novel human secreted protein #599.

(first entry)

18-APR-2000; 2000US-00552929 26-JAN-2001; 2001US-00770160 16-APR-2001; 2001WO-US008656 25-OCT WO200179449-A2 Homo immune suppression; stem Human; vaccination; cell sapiens. ccination; gene therapy; nutritional supplement;
proliferation; haematopoiesis; nerve tissue regeneration;
ppression; immune stimulation; anti-inflammatory; leukaemi leukaemia.

```
AAU30387
ID AAU3
XX
AC AAU3
XX
AC AAU3
XX
Y
AC AAU3
XX
Y
AC AAU3
XX
INOVE
XX
INOVE
XX
HUME
KW HUME
KW IMMN
XX
HOMC
XX
HOMC
XX
HOMC
XX
HOM
AC
PN WO21
XX
PR 16----
PF 26---
XX
PR 26---
XX
PR 18---
PR 18---
PR 18---
PR 26---
XX
PR 18---

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to novel human secreted polypeptides. The polypeptides and antibodies to the polypeptides are useful for determining the presence of or predisposition to a disease associated with altered levels of polypeptide. The polypeptides are also useful for identifying agents (agonists and antagonists) that bind to them. Cells expressing the proteins are useful for identifying a therapeutic agent for use in treatment of a pathology related to aberrant expression or physiological interactions of the polypeptide. Vectors comprising the nucleic acids encoding the polypeptides and cells genetically engineered to express them are also useful for producing the proteins. The proteins are useful in genetic vaccination, testing and therapy, and can be used as nutritional supplements. They may be used to increase stem cell proliferation; to regulate haematopoiesis; and in bone, cartilage, tendon proliferation; to regulate haematopoiesis; and in bone, cartilage, tendon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and/or nerve tissue growth or regeneration; immune suppression and/or stimulation; as anti-inflammatory agents; and in treatment of leukaem AAU25510-AAU33304 represent the amino acid sequences of novel human secreted proteins of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 114 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 20; Page 241; 765pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic acids encoding a range of human polypeptides, useful in genetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; vaccination; gene therapy; nutritional supplement; stem cell proliferation; haematopoiesis; nerve tissue regeneration; immune suppression; immune stimulation; anti-inflammatory; leukaemi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel human secreted protein #878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vaccination,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HYSE-) HYSEQ INC.
   Nucleic acids encoding a range of human polypeptides, useful in genetic
                                                            WPI; 2001-611725/70
                                                                                                                                                                                                                                                   18-APR-2000;
26-JAN-2001;
                                                                                                                                                                                                                                                                                                                                          16-APR-2001; 2001WO-US008656.
                                                                                                                                                                                                                                                                                                                                                                                                          25-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200179449-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immune suppression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU30387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU30387 standard; protein; 114
                                                                                                                                                                                         (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EEDEEDEED 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EEDEEDEED 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Liu C, Drmanac
                                                                                                                         Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         testing
                                                                                                                                                                                                                                                   2000US-00552929.
2001US-00770160.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RT:
                                                                                                                                21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 9; DB 4;
Pred. No. 3.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     leukaemias.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
RESULT 7
AAB57179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polypeptides and antibodies to the polypeptides are useful for determining the presence of or predisposition to a disease associated with altered levels of polypeptide. The polypeptides are also useful for identifying agents (agonists and antagonists) that bind to them. Cells expressing the proteins are useful for identifying a therapeutic agent for use in treatment of a pathology related to aberrant expression or physiological interactions of the polypeptide. Vectors comprising the nucleic acids encoding the polypeptides and cells genetically engineered to express them are also useful for producing the proteins. The proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to express them are also useful for producing the proteins. The proteins are useful in genetic vaccination, testing and therapy, and can be used as nutritional supplements. They may be used to increase stem cell proliferation; to regulate haematopoiesis; and in bone, cartilage, tendon
                                                                                                                                                                                                                                                                                                                                                                                        neuroprotective; cytostatic; cardioactive; immunomodulatory; muscular; vulnerary; gastrointestinal; nephrotropic; antiinfective; gynaecological; antibacterial; gene therapy; neural; immune; reproductive; renal; gastrointestinal; pulmonary; cardiovascular; proliferative disorder; wound; infectious disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 114 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU29510-AAU33304 represent the amino acid sequences of novel human secreted proteins of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and/or nerve tissue growth or regeneration; immune suppression stimulation; as anti-inflammatory agents; and in treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 20; Page 287; 765pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vaccination, testing and therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to novel human secreted polypeptides.
                                            Prostate cancer associated gene sequences, referred to as antigens, useful for treatment, prevention, and diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; prostate cancer; prostate cancer antigen; detection; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human prostate cancer antigen protein sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB57179
                                                                                                                                                                                                                                                               08-MAR-2000; 2000WO-US005988
                                                                                                                                                                                                                                                                                               21-SEP-2000.
                                                                                                                                                                                                                                                                                                                                WO200055174-A1.
                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                              such as prostate cancer.
                                                                                                                 WPI; 2000-587513/55
                                                                                                                                              Rosen CA,
                                                                                                                                                                             (HUMA-) HUMAN GENOME SCI INC (ROSE/) ROSEN C A.
                                                                                                                                                                                                                              12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            293 EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity 9; Conserv
                                                                                                 AAF16382.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard; protein; 128 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EEDEEDEED
                                                                                                                                               Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                              99US-0124270P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 9;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NO:1757.
                                                   prostate cancer of disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               leukaemias.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

Claim 11; Page 2225-2226; 2338pp; English

```
RESULT 8
ABP64928
AID ABP64928
AID ABP6
XX ABP6
XX ABP6
XX ABP6
XX ABP6
XX Huma
XX Huma
XX Cent
XX Cent
XX Immn
XX Homc
XX Hom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X000000000000000XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF15566 to AAF16505 encode the human prostate cancer associated proteins, called prostate cancer antigens, given in AAB56363 to AAB57302. The prostate cancer antigens can have neuroprotective, cytostatic, cardioactive, immunomodulatory, muscular, vulnerary, gastrointestinal, nephrotropic, antiinfective, gynaecological and antibacterial activities, and can be used in gene therapy. The prostate cancer antigen polynucleotides may be used for detection of prostate cancer, chromosome identification, as chromosome markers, and for numerous other diagnostic or research purposes. The prostate cancer antigens may be used to treat disorders such as neural, immune, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal, and proliferative disorders, wounds, and infectious diseases. AAF16506 to AAF16514 to AAB57303 represent sequences used in the exemplification of the present
                                                                                                                                                                   New isolated polynucleotide, useful in research, diagnostic or therapeutic methods, e.g. preventing or treating disorders involving aberrant protein expression or biological activity.
                 The present invention relates to novel human ABQ99608) and proteins (ABP64682-ABP65022). Therapeutic, diagnostic and research methods.
                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antiallergic; antiinflammatory; immunosuppressive; neuroprotective; cytostatic; haemostatic; virucide; antibacterial; fungicide; immunostimulant; cerebroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABP64928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-NOV-2000; 2000US-00714936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-NOV-2001; 2001WO-US042950.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200259260-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 central
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABP64928;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peripheral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                              F,
                                                                                                                                                                                                                                                                                                                       2002-590824/63.
                                                                                                                                                                                                                                                                                                                                                                     YT, Goodrich RW,
F, Xue AJ, Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                105 EEDEEDEED 113
                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   eral nervous system disease; non-healing wound; infectious disease; deficiency; immune disorder; bacterial infection; allergy; cancer; infection; autoimmune disorder; coagulation disorder; nootropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
9; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                expressed sequence tag; EST; haematopoietic disorder;
                                                                                                                                                                                                                                                                                              ABQ99514.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nervous system disease; viral infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EEDEEDEED 301
                                                                                                                             SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ħ
                                                                                                                        588; 394pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; **
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               588.
                                                                                                                                                                                                                                                                                                                                                                                                     Liu C,
                                                                                                                                                                                                                                                                                                                                                                  u C, Zhou P, Asuno
Wehrman T, Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 9; DB 3; Pred. No. 3.4
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 3;
                                                                                                                                                                                                                                                                                                                                                                                               Asundi V,
The The
           coding sequences (ABQ99268-
The sequences are useful in
. The polynucleotides may be
                                                                                                                                                                                                                                                                                                                                                                           RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                               Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                     Zhao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                               QA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

```
片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADA55380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polynuclectides and proteins are useful for preventing, treating or ameliorating disorders involving aberrant protein expression or biological activity, e.g. haematopoietic disorders, central/peripheral nervous system diseases, mechanical and traumatic disorders, non-healing wounds, immune deficiencies and disorders, infectious diseases caused by viral, bacterial or fungal infection, autoimmune disorders, allergic reactions and conditions, coagulation disorders, or cancer. The polynucleotide sequences of the invention were assembled from ESTs isolated mainly by sequencing by hybridisation, and in some cases, sequences obtained from one or more public databases. Note: The sequence data for this patent did not form part of the printed specification, but the best problem of the printed specification, but the problem of the printed specification of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polynucleotides are useful in diagnostics as expressed sequence tags (BSTs) for identifying expressed genes or for physical mapping of the human genome. The proteins may be used as molecular weight markers, or as nutritional sources or supplements. The proteins may be used to maintain and expand cell population in a totipotential or pluripotential state useful for re-engineering damaged or diseased tissues, transplantation, manufacture of bio-pharmaceuticals or the development of bio-sensors. The
                                                                                     WPI; 2003-395539/38.
N-PSDB; ADA53741.
                                                                                                                                                          Seki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cytostatic; Anti-inflammatory; Osteopathic; Neuroprotective; Nootropic; Gene Therapy; human; secretory protein; membrane proteins; cancer; inflammatory disease; osteoporosis; neurological disease.
                                                                                                                                                                                                                                                                                                                          14-SEP-2001; 2001JP-00328381
24-JAN-2002; 2002US-0350435P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     used in the field of molecular biology as hybridisation probes, primers for PCR, for chromosome and gene mapping, for the recombinant production of protein, or in generation of anti-sense DNA or RNA. The
                                                                                                                                                                                Yamamoto
                                                                                                                                                                                                       Isogai T,
                                                                                                                                                                                                                                                                                                                                                                                               21-MAR-2002; 2002EP-00006586
                                                                                                                                                                                                                                                                                                                                                                                                                                             19-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EP1293569-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADA55380;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADA55380 standard; protein; 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                     (REAS-) RES ASSOC BIOTECHNOLOGY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           293
                                                                                                                                                                                                                                                                           HELIX RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 9; Conserv
                                                                                                                                                        J, Isono Y
Yoshikawa T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID 2948
                                                                                                                                                        Ήĸ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                    Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                   Otsuki T, Wakamatsu A,
Hio Y, Otsuka K, Nagai
Otsuka M, Nagahari K, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 9;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 5;
                                                                                                                                                     A, Sato H, ai K, Irie Masuho Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transplantation,
                                                                                                                                                                              'n
                                                                                                                                                                                                    Ishii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                              Tamechika
                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                              Ţ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

New polynucleotides encoding full-length polypeptides, e.g. secreto; and/or membrane proteins, useful for developing medicines for disease which the gene is involved, or as target molecules for gene therapy

secretory or diseases

in

```
片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 XXCCCCCXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
streptococcus/GBS (Streptococcus agalactiae) or group A streptococcus/GAS (Streptococcus yogenes), comprising one of 5483 sequences (S1), given in the specification. The proteins have antibacterial and antiinflammatory activity. (I), mucleic acids encoding (I), ABM66044-ABN71326 and antibodies that bind (I) are used in the manufacture of medicaments for the treatment or prevention of infection or disease caused by Streptococcus bacteria, particularly S. agalactiae and S. pyrogenes. Nucleic acids encoding (I) are used to detect Streptococcus in a biological sample. (I) is used to determine whether a compound binds to (I). A composition comprising (I) or a nucleic acid encoding (I), may be used as a vaccine or diagnostic composition. The disease caused by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Streptococcus; GAS; GBS; group B streptococcus; Streptococcus agalactiae; group A streptococcus; Streptococcus pyogenes; antibacterial; antiinflammatory; infection; vaccine; meningitis; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to novel human secretory or membrane proteins (ADA54072-ADA55710) and their coding sequences (ADA5433-ADA54071). The coding sequences are useful in the gene therapy of diseases caused by abnormalities of the proteins, e.g. cancer, inflammatory diseases, osteoporosis or neurological disease.
                                                                                                                                                                                                                            New Streptococcus protein for the treatment or disease caused by Streptococcus bacteria, such detecting a compound that binds to the protein.
                                                                                                                                                                                                                                                                                                                                                                                                                        27-OCT-2000; 2000GB-00026333.
24-NOV-2000; 2000GB-00028727.
07-MAR-2001; 2001GB-00005640.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 group A streptococcus; Strept
antiinflammatory; infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-OCT-2001; 2001WO-GB004789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200234771-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Streptococcus pyogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Streptococcus polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABP28933 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 176
                                                                                                                                                                                                                                                                                                                                                   Telford
                                                                                                                                                                                                                                                                                                                                                                                (GENO-)
                                                                                                                                                                   invention relates to a protein (ABP25413-ABP30895) from group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           293 EEDEEDEED 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14; SEQ ID
                                                                                                                                                                                                                                                                                                                               1 J,
1 H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                           CHIRON SPA
                                                                                                                                                                                                                                                                                          ABN69564.
                                                                                                                                                                                                                                                                                                                                                                               INST GENOMIC RES
                                                                                                                                                                                                   Page 3865;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EEDEEDEED 157
                                                                                                                                                                                                                                                                                                                                                Masignani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NO 2948;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.2%;
                                                                                                                                                                                                4525pp; English.
                                                                                                                                                                                                                                                                                                                                                   ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             205pp;
                                                                                                                                                                                                                                                                                                                                                 Margarit Y RosI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 9;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7042.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 6;
                                                                                                                                                                                                                                                                                                                                                   Grandi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 176;
                                                                                                                                                                                                                                             prevention of infection as meningitis, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                   ຸດ
                                                                                                                                                                                                                                                                                                                                                   Fraser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
ARESULT 11
ANDA7645
ANDA7646
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local (
                                                                                                                                                                                                                                               The invention discloses a composition comprising two or more isolated rat or human polymucleotides or a polymucleotide which represents a fragment, derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polymucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a kit to perform the method, an array, a method for identifying an agent that increases or decreases the expression of the polymucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Streptococcus that is prevented or treated may be meningitis. Nucleic acid encoding (I) may be used to recombinantly produce (I) and may be used in gene therapy. Antibodies to (I) are used for affinity chromatography, immunoassays, and distinguishing/identifying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New composition comprising two or more isolated polypeptides, useful preparing a medicament for treating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADD47645 standard; protein; 214 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 202 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Streptococcus proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page; 1017pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENBANK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-268312/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Woolf C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO2003016475-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pain; neuronal tissue; gene therapy;
segmental nerve_injury; chronic constriction injury; CCI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l Similarity
9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nerve injury; SNI; Chung.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GEN HOSPITAL
BAYER AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EEDEEDEED 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D'urso D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P09429,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Befort
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 13341.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      °.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 9;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Costigan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
5B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

polynucleotides, a method for producing a purametric polynucleotides, a method for identifying a compound or small molecule that regulates activity in an animal of one or more of the polypeptides given in tactivity in an animal of one or more of the polypeptides given in treati

that is differentially expressed in neuronal tissue of a first animal subjected to pain, a method for identifying a compound which regulates the expression of a polynucleotide sequence which is differentially expressed in an animal subjected to pain, a method for identifying a compound that regulates the activity of one or more of the polynucleotides, a method for producing a pharmaceutical composition, a polynucleotides, a method for producing a pharmaceutical composition, a polynucleotides.

```
RESULT 12
ADE60447
ID ADE60
XX ADE60
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                             The invention discloses a composition comprising two or more isolated rat or human polynucleotides or a polynucleotide which represents a fragment, derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a bit to paragraph and a part of the vector.
                   kit to perform the method, an array, a method for identifying an agent that increases or decreases the expression of the polynucleotide sequent that is differentially expressed in neuronal tissue of a first animal subjected to pain, a method for identifying a compound which regulates to expression of a polynucleotide sequence which is differentially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pain and a pharmaceutical composition comprising the one or more polypeptides or their antibodies. The polypucleotide or the compound that modulates its activity is useful for preparing a medicament for treating pain (e.g. spinal segmental nerve injury (Chung), chronic constriction injury (CCI) and spared nerve injury (SNI) in an animal (e.g. gene therapy). The sequence presented is a human protein (shown in Table 2 of the specification) which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic form directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                                                                                                    New composition comprising preparing a medicament for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14-AUG-2001; 2001US-0312147P
01-NOV-2001; 2001US-0346382P
26-NOV-2001; 2001US-0333347P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENBANK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Woolf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-AUG-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 spinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADE60447 standard; protein; 214 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO2003016475-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (FARB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GEHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2003-268312/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ç
                                                                                                                                                                                                                                                                                                                                               1; Page; 1017pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pain; neuronal tissue; gene therapy; segmental nerve injury; chronic cons nerve injury; SNI; Chung.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GEN HOSPITAL BAYER AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D'urso D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2002WO-US025765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ã,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P09429,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Befort
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID
                                                                                                                                                                                                                                                                                                                                               English.
     subjected
                                                                                                                                                                                                                                                                                                                                                                                              two or more isolated polypeptides, useful treating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 9; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Costigan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6356.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
     ť
pain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           constriction injury; CCI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .4.7
     method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                            and a
agent
                                                                                                      sequence
                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

```
RESULT 13
ADE57980
片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pain and a pharmaceutical composition comprising the one or more polypeptides or their antibodies. The polypnctectide or the compound that modulates its activity is useful for preparing a medicament for treating pain (e.g. spinal segmental nerve injury (Chung), chronic constriction injury (CCI) and spared nerve injury (SNI) in an animal (e.g. gene therapy). The sequence presented is a human protein (shown in Table 2 of the specification) which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed that the printed the sequence data for this patent did not form part of the printed that the printed the sequence data for this patent did not form part of the printed that th
                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-AUG-2001; 2001US-0312147P
01-NCV-2001; 2001US-0346382P
26-NCV-2001; 2001US-0333347P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polynucleotides, a method for producing a pharmaceutical composition, method for identifying a compound or small molecule that regulates the activity in an animal of one or more of the polypeptides given in the specification, a method for identifying a compound useful in treating
                                                                                                                                                                                                             New composition comprise preparing a medicament
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       specification, but was obtained in electr
ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                               GENBANK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2003016475-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      spared
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADE57980 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    compound that regulates the activity of one or more of the
                                                                                                                                                                                                                                                                                                                                                                                         (FARB
                                                                                                                                                                                                                                                                                                                                                                                                             (GEHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                 2003-268312/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         293
                                                                                                                                                                                                                                                                                                                                            Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nerve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pain; neuronal tissue; gene therapy;
segmental nerve injury; chronic constriction injury; CCI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                             GEN HOSPITAL
                                                                                                                                                                                                                                                                                                                                                                                         BAYER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     214 AA;
                                                                                                                                                                                                                                                                                                                                          D'urso D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   injury;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                         ĀG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P09429,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  but was obtained in electronic form directly from WIPO at
                                                                                                                                                                                                             comprising icament for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SNI; Chung.
                                                                                                                                                                                                                                                                                                                                              Befort
                                                                                                                                                                                                                                                                                                                                                                                                             CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IJ
                                                                                                                                                                                                         two or mo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      214
                                                                                                                                                                                                                                                                                                                                          ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 9;
Pred. No.
                                                                                                                                                                                                           or more isolated polypeptides, useful ating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA
                                                                                                                                                                                                                                                                                                                                            Costigan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                  for
```

0

derivative or allelic variation of the nucleic acid sequence. Also comprising the vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide, a bost cell which is differentially regulated in an animal subjected to pair with the method, an array a market subjected to pair the method, an array a market subjected to pair the method, an array a market subjected to pair the method, an array a market subjected to pair the method, an array a market subjected to pair the method, an array a market subjected to pair the method, an array a market subjected to pair the method, an array a market subjected to pair the method, an array a market subjected to pair the method, an array a market subjected to pair the method, an array a market subjected to pair the method subject

fragment,

rat

Claim 1; Page;

1017pp; English.

```
DE57984

ID ADE57984

AC ADE5

XX ADE5

XX Huma

XX Huma

XX Huma

XX Huma

XX Homo

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          that increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal trissue of a first animal completed to pain, a method for identifying a compound which regulates the expression of a polynucleotide sequence which is differentially compound that regulates the activity of one or more of the polynucleotides, a method for producing a pharmaceutical composition, a compound for identifying a compound or small molecule that regulates the activity in an animal of one or more of the polynucleotides, a method for identifying a compound useful in treating compound for identifying a compound useful in treating compound a pharmaceutical composition comprising the one or more of the polypeptides or their antibodies. The polynucleotide or the compound that compound its activity is useful for preparing a medicament for treating pain and a pharmaceutical nerve injury (Cnng), chronic constriction compound (e.g. spinal segmental nerve injury (SNI)) in an animal (e.g. gene therapy). The sequence presented is a human protein (shown in Table 2 of the specification) which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed constriction is in the printed constriction in the printed constriction is a protein that was obtained in electronic form directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                 New composition comprising preparing a medicament for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       spinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human Protein P09429, SEQ ID NO 3852.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADE57984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 214
                                                                                        Claim 1; Page; 1017pp; English.
                                                                                                                                                                                                                                                GENBANK; P09429
                                                                                                                                                                                                                                                                             WPI; 2003-268312/26
                                                                                                                                                                                                                                                                                                                                      Woolf C,
                                                                                                                                                                                                                                                                                                                                                                                                  (GEHO )
(FARB )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-AUG-2002; 2002WO-US025765.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27-FEB-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2003016475-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADE57984 standard; protein; 214 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               293 EEDEEDEED 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pain; neuronal tissue; gene therapy; segmental nerve injury; chronic constriction injury; CCI; nerve injury; SNI; Chung.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
9; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                     GEN HOSPITAL CORP
BAYER AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EEDEEDEED 195
                                                                                                                                                                                                                                                                                                                                      D'urso D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.2%; 5u-
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                      Befort K,
                                                                                                                                                    treating
                                                                                                                                                        two or more isolated polypeptides, useful for treating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 9; 1
Pred. No.
                                                                                                                                                                                                                                                                                                                                      Costigan M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                 pain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        o
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

The invention discloses a composition comprising two or more isolated rat or human polynucleotides or a polynucleotide which represents a fragment,

New composition comprising preparing a medicament for

two or more isolated polypeptides, useful treating pain in an animal.

for

```
ADB60732

ID ADB6
XX ADB6
XX ADB6
XX ADB6
XX Huma
XX Huma
XX Span
XX Hom
XX Ggan
A GGA
A G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CC derivative or allelic variation of the nucleic acid sequence. Also CC claimed are a vector comprising the novel polynucleotide, a host cell CC comprising the vector, a method for identifying a nucleotide sequence CC which is differentially regulated in an animal subjected to pain and a kit to perform the method, an array, a method for identifying an agent CC that increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal tissue of a first animal CC subjected to pain, a method for identifying a compound which regulates the expressed in neuronal tissue of a first animal CC expressed in an animal subjected to pain, a method for identifying a compound which regulates the activity of one or more of the polynucleotides, a method for producing a pharmaceutical composition, a CC method for identifying a compound or small molecule that regulates the contivity in an animal of one or more of the polypeptides given in the specification, a method for identifying a compound useful in treating pain and a pharmaceutical composition comprising the one or more compound useful in treating colypeptides or their antibodies. The polynucleotide or the compound that composition composition construction construction injury (CCI) and spared nerve injury (SNI) in an animal (e.g. gene the sequence presented is a human protein (shown in Table 2 of the specification, which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed or from the printed in the printed in the polyperiod of the printed at the polyperiod of the printed at the printed in the printed and pain and p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human;
spinal
                                                                                                                                                                                                                                                                                                                                                                           14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human Protein P09429, SEQ ID NO 6644.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADE60732;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADE60732 standard; protein; 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO2003016475-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                   WPI; 2003-268312/26
GENBANK; P09429.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                           (GEHO ) GEN HOSPITAL CORP. (FARB ) BAYER AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        187 EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         293 EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pain; neuronal tissue; gene therapy; segmental nerve injury; chronic cons nerve injury; SNI; Chung.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    214 AA;
                                                                                                                                                                                                          D'urso
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2.2%;
                                                                                                                                                                                                          Befort
                                                                                                                                                                                                          ζ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 9;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                          Costigan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             constriction injury; CCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
The invention discloses a composition comprising two or more isolated rat cor human polynucleotides or a polynucleotide which represents a fragment, cc derivative or allelic variation of the nucleic acid sequence. Also cclaimed are a vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a that increases or decreases the expression of the polynucleotide sequence cc kit to perform the method for identifying a nothod for identifying an agent that is differentially expressed in neuronal tissue of a first animal cc the expression of a polynucleotide sequence which is differentially expressed in neuronal tissue of a first animal cc expression of a polynucleotide sequence which is differentially compound that regulates the activity of one or more of the polynucleotides, a method for identifying a compound which regulates the activity in an animal subjected to pain, a method for identifying a compound that regulates the activity in an animal of one or more of the polypuctides given in the specification, a method for identifying a compound useful in treating cp polypeptides or their antibodies. The polypucted one or more compound that rest activity is useful for preparing a medicament for treating pain (e.g. spinal segmental nerve injury (Cnung), chronic constriction constriction constriction constriction constriction the sequence presented is a human protein (shown in Table 2 of the specification) which is differentially expressed during pain. Note: the sequence data for this patent did not form part of the printed cc final circumstance in the printed of the printed construction in the sequence data for this patent did not form part of the printed cc final circumstance in the printed construction and construction in the printed construction and construction in the printe
                                              ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page; 1017pp; English.
```

Sequence 214 AA;

멼 Ś Query Match Best Local S Matches 9 187 EEDEEDEED 195 293 EEDEEDEED 301 Similarity 9; Conserv Conservative 2.2%; Score 9; DB 7; 100.0%; Pred. No. 5.4; tive 0; Mismatches 0, Length 214; Indels 0; Gaps 0

Search completed: July 22, 2004, 16:54:15 Job time : 56 secs

This Page Blank (uspto)

```
Result
No.
                                                                                                                                                                                                                                                                                                                                               Minimum :
                                                                                                                                                                                                                                                                                                                                                                                                                                   Title:
Perfect so
Sequence:
                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                               Post-processing: Listing first 45
                                                                                                                                                                                                                                                                                                                                                                    Total number
                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
      on:
                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                           DB seq length: 0
DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                           score:
                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1
     of hits satisfying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein search, using sw model
                                                                                                                                                                                                                                                  Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                         OLIGO
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                          July 22, 2004, 16:48:32 ; Search time 13 Seconds (without alignments) 1650.223 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-831-804-3
412
1 MSESDETKSISSL
                                                                                                                                                                                                                                                                                                                                                                                              141681 seqs, 52070155 residues
                                                                                                                                                                                                                                                                                                                 SwissProt_42:*
                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                MSESDETKSISSLISSSSSSS..........PLVKKARMDLLPNETSVISR 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
     Length
   BB
TF3A, SCHPO
Z235_MOUSE
RPOE_STRPY
HM1X HUMAN
HMG1 BUIG
HMG1 BUIG
HMG1 PUG
KC2B NEUG
TRT DROME
YEAST
RGP1_MOUSE
CENB_CRIGR
ECM2_HUMAN
CH60_PLAFG
YE58 YEAST
JIP2_MOUSE
HMG1_WOUSE
HMG1_WOUSE
HMG1_WOUSE
HMG1_WOUSE
HMG1_WOUSE
HMG1_WOUSE
HMG1_HUMAN
LIFC_MOUSE
FKB4_SPOFR
CRTC_HUMAN
LIF1_DROME
GRWD_HUMAN
IRX2_MOUSE
TUL1_HUMAN
IRX2_MOUSE
                                                                                                                                                                                                                                                                                                                                                                  chosen
                                                                                                                                                                                                                                                  IJ
                                                                                                                                                                                                                                                                                                                               summaries
                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                   parameters:
p48988 cricetulus
094769 homo sapien
p34940 plasmodium
Q99299 saccharomyc
Q99299 saccharomyc
Q64256 rattus norv
Q64362 rattus norv
Q64362 rattus sorv
P40620 vicia faba
P07155 mus musculu
P87179 schizosacch
Q6453 eucalyptus
P3788 mus musculu
P87179 homo sapien
Q35738 mus musculu
Q26486 spodoptera
P81066 mus musculu
Q36486 spodoptera
P81066 mus musculu
Q36486 mus musculu
Q36486 mus musculu
Q36486 mus musculu
                                                                                                                                                                                                                                                                                                                                                                  141681
                                                                                                                                                    P09429 homo sapien
P12682 sus scrofa
Q8tg12 neurospora
P19351 drosophila
P36076 saccharomyc
P46061 mus musculu
                                                                                                                                                                                               P58053
Q9ugv6
P10103
                                                                                                                                                                                                                    Q61116
Q8nzf7
                                                                                                                                                                                                                                   Q9ut15
                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                        3 streptococc
6 homo sapien
3 bos taurus
9 homo sapien
                                                                                                                                                                                                                          schizosacch
mus musculu
                                                                                                                                                                                                                     streptococc
```

8888	CRRR	RRRR	RRR	R R R	RA RA	RA RA	RA RA	ra Ra	R R	다 다 다	2 2 2 X	R R R	జ 🖁 🖁	888		HA HE	UHR			
-1- St	Cerruc Shpako "The g Nature -!- FU	RA Lucas M., Rochet M., Gaillardin C., Hunt C., Moore K., Hurst S.M., RA Lucas M., Rochet M., Gaillardin C., Tallada V.A., Garzon A., Thode G. RA Daga R.R., Cruzado L., Jimenez J., Sanchez M., del Rey F., Benito J., RA Dominguez A., Revuelta J.L., Moreno S., Armstrong J., Forsburg S.L.,	Borzy Eger Goffe	Woodw Weltj Gabel	Ruthe Skelt Taylo	James Moone	Colli Gentl	Wood Sgour Brook	STRAI	Nucleic /	"Iden Schiz	MEDLI	Schiz NCBI [1]	Schiz Eukar Schiz	10-OC Trans	Q9UTI 28-FI	RESULT 1 TF3A_SCHPO ID TF3A_S		444440 542210	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
RNA polymerase transcription SUBCELLULAR LO	kovski G. kovski G. genome s re 415:87 FUNCTION:	M., Ro	m K., L P., Zim au A.,	ard J., ens I., C., Fu	rford K	Y P , M	es M.	V., Gwi os J.,	N=972; NE=2184	ic Acids	"Identification and Schizosaccharomyces	NE=2208	osaccha TaxID=4	osaccha Yota; F osaccha	28-FEB-2003 (Rel. 41, 1 10-OCT-2003 (Rel. 42, 1 Transcription factor I: SFC2 OR SPAC144.09C	5; 5B-2003	SCHPO		ထ ထ ထ ထ ထ ထ ထ	
nerase III. A ption of the LOCATION:	vski G.V., Ussery enome sequence of 415:871-880(2002)	Aves Schet M. ruzado 1	anger I mermann Cadieu]	Volcka Vanstr chs M.,	Rutto Simmond	nes L., oule S.	Connor Goble A	lliam R Peat N. rown D.	8401; P	w Res.	ion and ch	M N.A., 2319; P	romyces	romyces ungi; A	(Rel. 4) (Rel. 4) in facto	(Rel. 4	STAN		1.9999	11111
ı un ⊢	sery D., sery D., s of Sch 2002).	.J., XI , Gailla L., Jime lta J.L	W., Wed	ert G., eels E. Fritzc	er S., :	Jones J	R., Cro	., Raja , Hayle . Brown	ubMed=1	30:2772-	charac	, W C	•	pombe scomyco	l, Last 2, Last r IIIA	1, Crea	TANDARD;		643 1 645 1 689 1 694 1 701 1	91 91 28 28
so binds the S ribosomal Nuclear (By	mbie W.H , Barrel hizosaco	ang Z., ardin C. enez J., Morer	A., Lel dler H., ano S.,	Aert k , Riegen C., Hol	Saunder: Tuares I Tuares I	M., Lead	nin A.,	ndream l s J., B	1859360	-2781 (2002)	erizat :	NCTION. 2087160		pombe (Fission yeast). scomycota; Schizosaccharomycet ales; Schizosaccharomycetaceae	annotat: (Factor)	ξ.	PRT	AI	DYI DYI MEA NUC APP	IF37 YMB3 PAK4 DYI1 HAP1
the tromal RNZ (By sim	R., Paul B.G., haromyo	Hunt C , Talla Sanche	Wambut Gloux S	., Robbe c M., So Lzer E.	Yuaii S D., Squa Walsh S	her S.	Davis	M.A., Laker S.	••	002).	ion of	•		n yeast izosacc ccharom	J- (I)		374	AL I GNMENTS	1 RAT 1 HUMAN ARATH L CHICK 2 MOUSE 2 XENLA	MOUSE YEAST HUMAN MOUSE MOUSE
e transcri RNA gene. similarit	ulsen I. ., Nurse yces pom ranscrin	ada V.Pez M.,	., Reir tt R., S., Lel	en J., chaefe, Moest	eeger Heeger H	, McDor	P., Fe.	yne M. , Bash			transc		•). haromy	update) on update) .) (TFIIIA).		B.	S		
ibed 5s	n I., Potas Nurse P.; pombe.";	ce K., I	hardt 1 Purnel: laure V	Grymon	(c, Sha (, Stev	nald S.	ltwell dalgo J	, Lyne			ription			cetes;						
RNA's.	shkin J 58 RNA	Zon A., F., Be	R., Poh le B., Mott:	prez B. ueller-	rp S.,	S., Ja , McLea ., Odel	T., Fra	R., Ste Bowman			ranscription factor								Q63100 Q63100 Q6312 Q65312 P15771 Q06335 P25980	070194 Q04228 Q04228 096013 088489
Initiat	·,	Benito J.,	l T.M.	Auer S	tehead	gels K n J., l C.,	ser A.,	wart A. S.,			IIIA								0 ratti 0 ratti 6 homo 2 arab: 1 galli 5 mus :	4 mus r 8 sacch 3 homo 5 mus r 8 mus r
ates	# V	., .,	•	: ;	'n	•					from								rattus norv rattus norv homo sapien arabidopsis gallus gall mus musculu xenopus lae	mus musculu saccharomyc homo sapien mus musculu mus musculu

```
SOLITIFIER TOWNS
RAD SISTER 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenebB_SPombe; SPAC144.09c; -.
InterPro; IPR007087; Znf C2H2.
Pfam; PF00006; zf-C2H2; 1.
ProDom; PD000003; Znf_C2H2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AY091590; AAM00046.1; -.
EMBL; AL132675; CAB59689.1; -.
ERR; T37676; T37676.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         between the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There a use by non-profit institutions as long as i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      )61116; vecu,,
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HSSP:
Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo i Okazaki Y., Furuno M., Saito R., Suzuki H., Yamanaka I., Kiyosai Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojol Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J., Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W., Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse)
                                                                                                                            MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Skin,
                                                                                                                                                                                                            "Comparative analysis of a conserved zinc finger gene cluster on chromosome 19q and mouse chromosome 7.\ "; Genomics 33:112-120(1996).
                                                                                                                                                                                                                                                                                                 Shannon
                                                                                                                                                                                                                                                                                                                     MEDLINE=96207307;
                                                                                                                                                                                                                                                                                                                                           STRAIN=CD-1;
                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWISS-PROT entry is copyright. It is produced through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38 RPSLLEQHLRTHSN 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14;
                                                                                                                                                                                                                                                                                             =96207307; PubMed=8617494;
M., Ashworth L.K., Mucenski M.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESLLEQUIRTHSN 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Repeat; 4 23 4 5 3 10 113 12 114 114 2: 236 2 267 2 349 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                           TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47
107
138
138
226
226
291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 14; DB; Pred. No. 1.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C2H2-TYPE (ATYPICAL).
C2H2-TYPE.
; 7469C701FFF08FF6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                  and Thymus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          n update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           There are no restrictions ng as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΒB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.4e-05;
                                                                                                                                                                                                                                                                                                 Lamerdin J.E., Branscomb E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93) (Zfp-93)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 374;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                 Kiyosawa H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a collaboration
        Cousins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
RC STRAIN—C57BL/6J;
RX MEDLINE=22388257; pubMed=12477932;
RX MEDLINE=22388257; pubMed=12477932;
RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Strausberg R.L., Feingold E.A., Shenmen C.M., Schuler G.D.,
RA Klausner R.D., Collins F.S., Wagner L., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hullyk S.W.,
RA Richards S., Lower M., Schein T.B., Toshiyat M., Marra M.A.,
RA Richards S., Lower M., Worley K.M., Marra M.A.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Wyers R.M.,
RA Rodri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RA Kanai A., Kawji H., Kawasawa Y., Kedzierski R.M., King B.L.,
RA Kanai A., Kawji H., Kawasawa Y., Kedzierski R.M., King B.L.,
RA Magdott D.R., Murochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
RA Magdott D.R., Maltais L., Marchiomni L., McKenzie L., Miki H.,
RA Magashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,
RA Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,
RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,
RA Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K.,
RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
RA Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,
RA Vuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,
RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
RA Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,
RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,
RA Nirrav R. Havashizahi W., Waterston R., Lander E.S., Rogers J.,
RA Nirrav R. Havashizahi V., Sasaki D., Shibata K., Shinagawa A.,
RA Nirrav R. Havashizahi V., Waterston R., Lander E.S., Rogers J.,
RA Nirrav R. Havashizahi V., Waterston R., Lander E.S., Rogers J.,
RA Nirrav R. Havashizahi V., Waterston R., Lander E.S., Rogers J.,
RA Nirrav R. Havashizahi V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dalla B., Dragani T.A., Fletcher C.F., Forrest A., Frazer Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jackson I.J., Jackson I.J., Jackson I.J., Jackson I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Birney E., Hayashizaki Y.;
"Analysis of the mouse transcriptome based on functional annotation 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                          EMBL; AK028905; BAC26187.1; --
EMBL; AK040325; BAC30565.1; --
EMBL; BC003776; AAH03776.1; --
HSSP; P25490; 1ZNM
MGD; MGI:107611; Zfp93.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute. There are no resuse by non-profit institutions as long as its content modified and this statement is not removed. Usage by an
                                                                                                                                                                                                                                                                                                                                                                                             entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collable between the Swiss Institute of Bioinformatics and the EMBL outsithe European Bioinformatics Institute. There are no restrictions
                                                                                                                                                                                                                                                                                                                                    EMBL; U46186; AAB03529.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SIMILARITY: Contains 1 KRAB domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FINGER PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                               (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tomita M.,
abe Y., Wells C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jarvis E.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ×.s.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a collaboration
MBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O
ff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 way
```

InterPro; IPR001909; KRAB.
InterPro; IPR007087; Znf_CZH2.
InterPro; IPR007086; Znf_CZH2_sub.
Pfam; PF01352; KRAB; 1.
Pfam; PF00096; Zf-CZH2; 13.

PR00048; ZINCFINGER.

4

```
RESULT 3

RPOES STRP8
ID RPOES S
AC QBNZF7
DT 28-FEB
DT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Transcription I
Nuclear proteir
DOMAIN
ZN FING 28:
ZN FING 34:
ZN FING 36:
ZN FING 36:
ZN FING 45:
ZN FING 45:
ZN FING 45:
ZN FING 56:
ZN FING 66:
ZN FING 76:
ZN 
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

STRAIN-MGAS8232 / Serotype M18;

MEDLINE=21927593; PubMed=11917108;

Smoot J.C., Barbian K.D., Van Gompel J.J., Smoot L.M., Chaussee M.S.,

Sylva G.L., Sturdevant D.E., Ricklefs S.M., Porcella S.F.,

Parkins L.D., Beres S.B., Campbell D.S., Smith T.M., Zhang Q.,

Rapur V., Daly J.A., Veasy L.G., Musser J.M.;

"Genome sequence and comparative microarray analysis of serotype M18

group A Streptococcus strains associated with acute rheumatic fever
                                                                                                         Proc. Natl. Acad. Sci. U.S.A. 99:4668-4673(2002).
-!- FUNCTION: Participates in both the initiation and recycling phase of transcription. In the presence of the delta subunit, RNAP displays an increased specificity of transcription, a decreased affinity for nucleic acids, and an increased efficiency of RNA synthesis because of enhanced recycling (By similarity).
-!- SUBUNIT: RNAP is composed of a core of 2 alpha, a beta and a beta subunits. The core is associated with a delta subunit and one of several sigma factors (By similarity).
-!- SIMILARITY: Belongs to the rpoE family.
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-FEB-2003 (Rel. 41,
28-FEB-2003 (Rel. 41,
28-FEB-2003 (Rel. 41,
probable DNA-directed
                                                                                                                                                                                                                                                                                                                                                                                                       outbreaks.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RPOE OR SPYM18_1960.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8NZF7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RPOE_STRP8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS50805; KRAB; 1.

PROSITE; PS50028; ZINC FINGER C2H2 2; 1

PROSITE; PS50157; ZINC FINGER C2H2 2; 1

Transcription regulation; DNA-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TaxID=186103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SM00355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SM00349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PD000003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KPFHCSVCGK 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KPFHCSVCGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                285
285
313
341
341
397
397
485
485
5537
593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pyogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; KRAB; 1.
7nF C2H2; 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Znf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86
307
335
363
391
419
447
475
503
503
531
643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     73012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.4%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    s (serotype M18).
Lactobacillales; Streptococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _C2H2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RNA polymerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 10;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C2H2-TYPE.
C2H2-TYPE.
A -> P (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KRAB.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -> P (IN REF. 2; 7459CD140F5AF469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          delta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zinc-finger;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAC26187) .
CRC64;
                                                                                                                                                                                                                                                                                                              and recycling phases
a subunit, RNAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (RNAP delta
                                                                                                                                                                 ilarity).
a beta and a beta'
and one of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
RESULT 4
RPOE_STRPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
STRAIN=SSI-1 / Serotype M3;
MEDLINE=22683278; PubMed=12799345;
Nakagawa I., Kurokawa K., Yamashita A., Nak
Okahashi N., Kawabata S., Yamazaki K., Shik
Hayashi H., Hattori M., Hamada S.;
"Genome sequence of an M3 strain of Streptc
large-scale genomic rearrangement in invasi
into phage evolution.";
Genome Res. 13:1042-1055(2003).

-!- FUNCTION: Participates in both the init
of transcription. In the presence of th
displays an increased specificity of tr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P58053;
16-OCT-2001
16-OCT-2001
15-MAR-2004
                                                                                                                                                                                                                             STRAIN=MGAS315 / Serotype M3;
MEDLINB=22133808; PubMed=12122206;
Beres S.B., Sylva G.L., Barbian K.D., Lei I
Mammarella N.D., Liu M.-Y., Smoot J.C., Poj
Campbell D.S., Smith T.M., McCormick J.K.,
Schlievert P.M., Musser J.M.;
                                                                                                                                                                                                                                                                                                                             STRAIN-SF370 / ATCC 700294 / Serotype M1;
MEDLINE=21192684; PubMed=11296296;
Ferretti J.J., McShan W.M., Ajdic D.J., Savic D.J., Savic G., Lyon K., Primeaux C., Sezate S., Suvorov A.N., Kenton S., Lai H.S., Lin S.P., Qian Y., Jia H.G., Najar F.Z., Ren Q., Zhu H., Song L., White J., Yuan X., Clifton S.W., Roe B.A., McLaughin R.;
"Complete genome sequence of an MI strain of Streptococcus pyogenes.";
Proc. Natl. Acad. Sci. U.S.A. 98:4658-4663(2001).
                                                                                                                                                                                                     "Genome sequence of a serotype M3 strain phage-encoded toxins, the high-virulence
                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A
STRAIN=SF370 / ATO
                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                              Proc. Natl.
                                                                                                                                                                                             emergence."
                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. STRAIN=MGAS315 / S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Streptococcus pyogenes (serotype M3).
Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Streptococcus pyogenes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RPOE OR SPY1895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-OCT-2001 (Rel. 40,
15-MAR-2004 (Rel. 43,
Probable DNA-directed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AE010100; AAL98451.1;
HAMAP; MF_00357; -; 1
InterPro; IPR007759; RNA_po
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removentities requires a license agreement (Sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RPOE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA-directed RNA polymerase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR007759; Ri
Pfam; PF05066; RNA_pol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   actor
                                                                                                                                                                                                                                                                                                                                                                                                                                                          _TaxID=1314, 198466;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               non-profit
                           13:1042-1055(2003).
N: Participates in both the initiation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          191 AA;
                                                                                                                                                                                Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OR SPYM3_1633 OR
                                                                                                                                                                              Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22250 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RNA_pol_delta.
ol_delta;_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                institutions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation updat
RNA polymerase delta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                             U.S.
                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 9; DB 1; Pred. No. 0.4
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Transcription; Com
ASP/GLU-RICH (ACID)
; CD081EFA0BC7C329
                                                                                                                                                                             99:10078-10083 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                              of Streptococcus pyogenes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPS0233.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n update)
delta su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (See http://www.isb-sib
                                                                                                   Nakata M., Tomiya
Shiba T., Yasunaga
                                                                                                                                                                                                                                        ei B., Hof
Porcella
.K., Leung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
. 0.49;
  the delta subu
                                                                                                                                                                                                                  0f
                                                                                                                                                                                                   phenotype,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ACIDIC).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ည
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               subunit
                                                                                                                                                                                                                  group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Usage,
                                                                                                                                                                                                                                         Hoff J.S.,
lla S.F., Parkins
ung D.Y.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 its content
Usage by a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CRC64;
                           and recycling
                                                                                                Tomiyasu Y.
                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (RNAP
                                                                                                                                                                                                                  Streptococcus:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                      clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             delta
                                                               new
                                                                           reveals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ST
                                                                                                              Υ.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tor
                                                              insights
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .ch/announce/
                                                                                                                                                                                                                                                      L.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   commercial
                                                                           QJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

subunit,

decreased

```
RA Dunham I., Hunt A.R., Collins J.E., Bruskiewich R., Beare D.M.,
RA Dunham I., Hunt A.R., Collins J.E., Bruskiewich R., Beare D.M.,
RA Bagguley C., Bailey J., Barlow K.F., Bates K.N., Beasley O.P.,
RA Bagguley C., Blakey S.E., Bridgeman A.M., Buck D., Burgess J.,
RA Bird C.P., Blakey S.E., Bridgeman A.M., Buck D., Burgess J.,
RA Bird C.P., Blakey S.E., Bridgeman A.M., Buck D., Burgess J.,
RA Bird C.P., Blakey S.E., Bridgeman A.M., Buck D., Burgess J.,
RA Bird C.P., Blakey S.E., Bridgeman A.M., Buck D., Burgess J.,
RA Bird C.P., Blakey S.E., Bridgeman A.M., Buck D., Burgess J.,
RA Clegg S.M., Cobley V.E., Cole C.G., Collier R.E., Chen Y., Clark G.,
RA Conroy D., Corby N.R., Coville G.J., Cox A.V., Davis J., Dawson E.,
RA Conroy D., Corby N.R., Coville G.J., Cox A.V., Davis J., Dawson E.,
RA Dhami P.D., Dockree C., Dodsworth S.J., Durbin R.M., Ellington A.G.,
RA Dhami P.D., Dockree C., Dodsworth S.J., Durbin R.M., Ellington A.G.,
RA Gilbert J.G.R., Goward M.E., Grafham D.V., Griffiths M.N.D., Hall C.,
RA Hunt S.E., Jones M.C., Kershaw J., Kimberley A.M., King A.,
RA Hunt S.E., Jones M.C., Kershaw J., Kimberley A.M., King A.,
RA Martyn I.D., Mashreghi-Mohammadi M., Matthews L.H., Mccann O.T.,
RA McClay J., Mclaren S., McMurray A.A., Milne S.A., Mortimore B.J.,
RA McClay J., Mclaren S., McMurray A.A., Milne S.A., Mortimore B.J.,
RA Phillips S.H., Plumb R.W., Ramsay H., Ransey Y., Rogers L., Ross M.T.,
RA Scott C.E., Spragon L., Steward C.A., Sulston J.E., Swann R.M.,
RA Wijlhiams L., Williams S.A., Williamson H., Wilher T.E., Wilming L.,
RA Milliams L., Williams S.A., Williamson H., Wilmer T.E., Wilming L.,
RA Milliams S., Kawasaki K., Sasaki T., Asakawa S., Kudoh J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation updat
10-OCT-2003 (Rel. 42, Last annotation updat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA-directed RNA polymerase; Transcription; Complete proteome.

DOMAIN 118 191 ASP/GLU-RICH (ACIDIC).

SEQUENCE 191 AA; 22264 MW; D1781EFA0BC6926C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF05066; RNA pol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HAMAP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=20057165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HMG1L10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , 90GV6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          affinity for nucleic acids, and an increased efficiency of RNA synthesis because of enhanced recycling (By similarity). SUBUNIT: RNAP is composed of a core of 2 alpha, a beta and a b subunits. The core is associated with a delta subunit and one several sigma factors (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: Belongs to the rpoE family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AE006614; AAK34603.1; -.
AE014167; AAM80240.1; ALT_INIT.
AP005141; BAC63328.1; ALT_INIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        293 EEDEEDEED 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MF_00357; -; 1
ro; IPR007759; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     non-profit institutions as long d and this statement is not removed. s requires a license agreement (See an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EEDEEDEED 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                because of enhanced recycling (By similarity).
RNAP is composed of a core of 2 alpha, a beta and a beta'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed=10591208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; F1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA_pol_delta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               delta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 9;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
o. 0.49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
(HMG-1L10).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               noved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

TATE TERMSOONS

Bos taurus (Bovine).

HMGB1 OR HMG1.

01-AUG-1990 (Rel. 10, Creace 01-AUG-1990 (Rel. 15, Last s 10-0CT-2003 (Rel. 42, Last a High mobility group protein

10, Created)
15, Last sequence update)
42, Last annotation update

ш

(HMG-1)

update)

HMG1 BOVIN P10103;

STANDARD;

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovidae; Bovinae; Bos.

뮍

8

```
밁
                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RA Shintani A., Shibuya K., Yoshizaki Y., Aoki N., Mitsuyama S.,
RR Roe B.A., Chen F., Chu L., Crabtree J., Deschamps S., Do A., Do T.,
RR Dorman A., Fang F., Fu Y., Hu P., Hua A., Kenton S., Lai H., Iao H.I.,
RR Lewis J., Lewis S., Lin S.-P., Loh P., Malaj E., Nguyen T., Pan H.,
RR Lewis J., Lewis S., Lin S.-P., Loh P., Malaj E., Nguyen T., Pan H.,
RR Phan S., Qi S., Qian Y., Ray L., Ren Q., Shaull S., Sloan D., Song L.,
RR Wang Q., Wang Z., White J., Willingham D., Wu H., Yao Z.,
RR Zhan M., Zhang G., Chissoe S., Murray J., Miller N., Minx P.,
RR Fulton R., Johnson D., Bemis G., Bentley D., Bradshaw H., Bourne S.,
RR Cordes M., Du Z., Fulton L., Goela D., Graves T., Hawkins J.,
RR Cordes M., Du Z., Fulton L., Goela D., Graves T., Hawkins J.,
RR Scheet P., Walker C., Wamsley A., Wohldmann P., Pepin K., Nelson J.,
RR Scheet P., Walker C., Wamsley A., Wohldmann P., Pepin K., Nelson J.,
RR Wilson R., Emanuel B.S., Shaikh T., Kurahashi H., Saitta S.,
RR Wilson R., Emanuel B.S., Shaikh T., Kurahashi H., Saitta S.,
RR Budarf M.I., McDermid H.E., Johnson A., Wong A.C.C., Morrow B.E.,
RR Edelmann L., Kim U.J., Shizuya H., Simon M.I., Dumanski J.P.,
RR Edelmann L., Wilkinson P., Bodenteich A., Hartman K., Hu X.,
RR Khan A.S., Lane L., Tilahun Y., Wright H.;
RT "The DNA sequence of human chromosome 22.";
RESULT 6
HMG1_BOVIN
                                                                                                                                              Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute. There are no rest
use by non-profit institutions as Its content
modified and this statement is not removed. Usage by an
entities requires a license agreement (See http://www.isb-
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It between the Swiss Institute of Bioinforthe European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -!- SUBCELLULAR LOCATION: Nuclear (By simil-!- SIMILARITY: Belongs to the HMG1/HMG2 pr-!- SIMILARITY: Contains 2 HMG box domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nature 402:489-495(1999).
                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; Z95115; CAB62951.1; -. HSSP; P07156; 1NHN.

    -!- FUNCTION: Binds preferentially single-stranded
double stranded DNA (By similarity).

                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                 DNA BIND
                                                                                                                                                                                                                                                                                                     Nuclear
                                                                                                                                                                                                                                                                                                                   PROSITE; PS00353; HMG_BOX_1; PROSITE; PS50118; HMG_BOX_2;
                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00886; HIGHMOBLTY12.
SMART; SM00398; HMG; 2.
                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000135; Highmoblty_
InterPro; IPR000910; HMG_12_box.
Pfam; PF00505; HMG_box; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genew; HGNC:4994; HMG1L10.
                                                                                                                                                                                                                                                              BIND
                                                                          188
                                                                                                             293
                                                                                                                                                                                                                                                                                 protein; Chromosomal
D 9 79
                                                                                                                                                Similarity
9; Conserv
                                                                          BEDEEDEED
                                                                                                           EEDEEDEED 301
                                                                                                                                                                                                                         186
211 AA;
                                                                                                                                                Conservative
                                                                                                                                                                                                                                        163
211
                                                                                                                                                                                                                           24218
                                                                                                                                                  2.2%; Score 9; DB
100.0%; Pred. No. 0.
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                   BOX 1; 1.
BOX 2; 2.
                                                                                                                                                                                                                           MW.
                                                                                                                                                                                                                                                            L protein; D
HMG BOX 1.
HMG BOX 2.
                                                                                                                                                                                                                                            ASP/GLU-RICH (ACIDIC)
                                                                                                                                                                                                                             2A53BA2AEA6DF7CD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ght. It is produced through a collaboration
Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                   DNA-binding; Repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            noved. Usage by and for commercial
  (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    similarity)
                                                                                                                                                                    DB 1;
. 0.53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                     Length 211;
                                                                                                                                                      0;
                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family.
                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                      0,
                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       пo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       way
                                                                                                                                                      0;
```

HMGB1 OR HMG1

```
ID AC DT DT DT DT
                                                                                                                 밁
                                                                                                                                    Ş
                                                                                                                                                                                                       RESULT 7
                                                                                                                                                          Query Match
Best Local S
Matches 9
                                                                                                                                                                                                                                                                                             PRINTS; ENCO398;
HMG1 HUMAN STANDARD; PRT; 214 AA. P09429; O1-MAR-1989 (Rel. 10, Created) O1-AUG-1990 (Rel. 15, Last sequence update) 10-OCT-2003 (Rel. 42, Last annotation update) High mobility group protein 1 (HMG-1).
                                                                       HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                   entities
or send a
                                                                                                                                                                                                                                                                                                                                                                                                                                  between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fcentities remnires a lionary and for entities remnires a lionary as its content is solved and this statement is not removed.
                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                            InterPro; IPR000135; Highmoblty_InterPro; IPR000910; HMG_12_box.Pfam; PF00505; HMG_box; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 1-36.

MEDILINE=90306387; PubMed=2365081;

Christen T., Bischoff M., Hobi R., Kuenzle C.C.;

"High mobility group proteins 1 and 2 bind preferentially to brominated poly(dG-dC).poly(dG-dC) in the z-DNA conformation to other types of Z-DNA.";
                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEBS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN-Holstein; TISSUE=Fetal thymus;
MEDLINE-89057489; PubMed=3194213;
Kaplan D.J., Duncan C.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Isolation and partial sequence of bovine cDNA clones for the high-mobility-group protein (HMG-1)."; Biosci. Rep. 4:49-57(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kaplan D.J., Duncan C.H.;
"Full length cDNA sequence for bovine high mobility group 1 (HMG1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pentecost B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=84128872;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Nuclear.
SIMILARITY: Belongs to the HMG1/HMG2 pr
SIMILARITY: Contains 2 HMG box domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FUNCTION: Binds preferentially double stranded DNA.
                                                                                                                                                                                                                                                                                                                                                              S01947; S01947.
; P07156; INHN.
                                                                                                                 187
                                                                                                                                                                                                                                                                                                                                                                                 X12796; CAA31284.1; -. M26110; AAA30567.1; -.
                                                                                                                                                          9;
                                                                                                                                                                                                                                                                                                                                                                                                                     an
                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                 PR00886;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Acids Res. 16:10375-10375(1988)
                                                                                                                                      EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                requires a license agreement (S
an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OF 115-214
                                                                                                                                                                                                       214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                267:139-141(1990).
                                                                                                                                                          Conservative
                                                                                                                                                                                                       AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dixon
                                                                                                                                                                                                                                                                                                         HMG;
                                                                                                                                                                                                                                                                                                                  HIGHMOBLTY12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=6141822;
                                                                                                                                                                                                    24776 MW;
                                                                                                                                                                     2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G.H.;
                                                                                                                                                     J.0%;
O;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N.A.
                                                                                                                                                                               Score
                                                                                                                                                                                                  ASP/GLU-RICH (ACID)
EHPGL -> PGGGV (IN
; B283A80FC7F0F433
                                                                                                                                                                   Pred.
                                                                                                                                                          Mismatches
                                                                                                                                                             e 9;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   single-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                          noved. Usage by and for commercial
(See http://www.isb-sib.ch/announce/
                                                                                                                                                                   . DB
                                                                                                                                                                 1;
.54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                        0;
                                                                                                                                                                             Length 214;
                                                                                                                                                                                                  REF. 2
CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                             2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unwinds
                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     but not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                ii
                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                no
                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                       0
```

EMBL; X12597; CAA31110.1; EMBL; U51677; AAB08987.1; EMBL; BC0003378; AAH00378.1 EMBL; BC0003981; AAH30981.1 PIR; S02826; S02826.

CAA31110.1; AAB08987.1;

or send an entities

requires a

equires a license agreement (email to license@isb-sib.ch)

(See

. Usage by and for commercial http://www.isb-sib.ch/announce/

commercial

```
RA Strauberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner I., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Mang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Wullahy S.J.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Wiltalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Wiltalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Schein J.E., Jones S.J.M., Marra M.A.,
"Generation and initial analysis of more than 15,000 full-length
Naman and mouse cDNA sequences",
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                  Rasmussen R.A., Dorow D.S.,
"Two-dimensional electrophoretic analysis c
                                                                                                                      This
                                                                                                                                                                                                                                                              Electrophoresis 18:588-598(1997).
-!- FUNCTION: Binds preferentially double stranded DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              [1]
SEQUENCE FROM N.A.
MEDLINE=89160247; PubMed=2922262;
Wen L., Huang J.K., Johnson B.H., Re
                                                       the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                           proteins: mapping of proteins lineage kinase MLK2.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=97295304; PubMed=9150946; Rasmussen R.K., Ji H., Eddes J.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Breast carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=22388257; PubMed=12477932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perrari S., Finelli P., Rocchi M., )
"The active gene that encodes human
(HMG1) contains intron-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Cervix,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
MEDLINE=96299787;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human).
                                                                                                                                                                       SUBCELLULAR LOCATION: Nuclear. SIMILARITY: Belongs to the HMG1 SIMILARITY: Contains 2 HMG box
                                                                             SWISS-PROT entry is copyright. It is producen the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     iB=96299787; PubMed=8661151;
iS., Finelli P., Rocchi M., Bianchi M.E.;
ctive gene that encodes human high mobility group 1 protein contains introns and maps to chromosome 13.";
cs 35:367-371(1996).
non-profit institutions as long and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acids Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        57-64 AND 112-126.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17:1197-1214(1989).
                                                                                                                                                                                                         HMG1/HMG2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Reeck G.
                                                                                                                                                                             domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Moritz R.L.,
                                                                                                                                                                                                                                                                                          single-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       encodes nonhistone chromosomal
                                                                                                         is produced through
                     There are no rest
                                                                                                                                                                                                   protein family
                                                                                                                                                                                                                                                                                                                                                                                 of human
o the SH3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
R.
                                                                                and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Reid G
                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                 breast carcinoma domain of mixed
                                              restrictions
                                                                                                                                                                                                                                                                                             and
                                                                                      EMBL
                                                                                                               ρ
                                                                                   collaboration -
                                                    g
```

Genew; HGNC:4983; HMGB1.

163905;

```
RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00353; HMG, BOX 1; 1.

PROSITE; PS5011B; HMG_BOX 2; 2.

Nuclear protein; Chromosomal protein; DNA-binding; Repeat.

INT MET 0 0

DNA_BIND 8 78 HMG BOX 1

DNA_BIND 94 162

DOWALN 186

SECTION 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-AUG-1989 (Rel. 12, Created)
01-AUG-1990 (Rel. 15, Last sequence update)
10-CCT-2003 (Rel. 42, Last annotation update)
High mobility group protein 1 (HMG-1).
HMGB1 OR HMG1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HMG1_PIG
P12682;
01-OCT-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     00;
00;
00;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GO:0000228; C:nuclear chromosome; NAS. GO; GO:0003697; F:single-stranded DNA binding; NAS. GO; GO:0006268; P:DNA unwinding; NAS. InterPro; IPR000135; Highmobity 12. InterPro; IPR000910; HMG 12_box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                               HSSP, P0715; 1AAB.
HSSP, P0715; 1PR000135; Highmoblty 12.
InterPro; IPR000910; HMG 12_box.
InterPro; IPR000910; HMG 2.
                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE=89050965; PubMed=3191113;
Tsuda K.-I., Kikuchi M., Mori K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                        entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biochemistry
Pfam; PF00505; HMG_box; 2. —
PRINTS; PR00886; HTGHNOBLTY12.
SMART; SM00398; HMG; 2.
PROSITE; PS00353; HMG_BOX_1; 1.
PROSITE; PS50118; HMG_BOX_2; 2.
Nuclear protein; Chromosomal protein; DNA-binding; Repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleotide sequence."
                                                                                                                                                                                                                                       EMBL; M21683; AAA31050.1; -. PIR; A28897; A28897.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SIMILARITY: Belongs to the HMG1/HMG2 protein family.-!- SIMILARITY: Contains 2 HMG box domains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Primary structure of non-histone protein HMG1 revealed by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chemistry 27:6159-6163(1988).
FUNCTION: Binds preferentially single-stranded DNA and unwinds double stranded DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: Nuclear.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             293 EEDEEDEED 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EEDEEDEED 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.2%; bu-
, 100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24762 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 9; 1
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HMG BOX 1.

HMG BOX 2.

ASP/GLU-RICH (ACIDIC).

; B3C6A80FC7F0F433 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Waga S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  214 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1;
. 0.54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yoshida M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

RESULT 10

SAFE

TRT_DROME P19351; 01-NOV-1990 01-AUG-1991

(Rel. (Rel.

Created)
Last sequence update)

STANDARD; 16, 19,

396

```
RESULT 9
KC2B_NEUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SETER
                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
당
                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches
                                                    Matches
                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INIT_MET
DNA_BIND
DNA_BIND
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-OCT-2003 (Rel. 42, Created)
10-OCT-2003 (Rel. 42, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Casein kinase II beta chain 1 (CK II beta 1).
                                                                                                                                                                                                                              the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Neurospora crassa.
Eukaryota, Fungi, Ascomycota, Pezizomycotina, Sordariomycetes,
Sordariomycetidae, Sordariales, Sordariaceae, Neurospora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8TG12;
10-0CT-2003
                                                                                                      PRINTS; PR00472; CASNKINASEII.

ProDom; PD003829; CAS kinase II; 1.

PROSITE; PS01101; CK2_BETA; 1.

Transferase; Serine/threonine-protein kinase; Phosphorylation.

SEQUENCE 333 AA; 37107 MW; 1744C2DLF7E1D67C CRC64;
                                                                                                                                                                                                                                                                                                                                          a beta 2 subunit.
-!- PTM: Phosphorylated by alpha chain (By similarity).
-!- SIMILARITY: Belongs to the casein kinase 2 beta chain family.
                                                                                                                                                                                                                                                                                                                                                                               -!- FUNCTION: Plays a complex role in regulating the basal catalytic activity of the alpha subunit (By similarity).
-!- SUBUNIT: Heterotetramer of 2 alpha subunits, a beta 1 subunit and
                                                                                                                                                                                                                                                                                                                                                                                                                         Genes Dev.
                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=21956574; PubMed=11959847;
Yang Y., Cheng P., Liu Y.;
"Regulation of the Neurospora circadian clock by casein kinase II.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CKB1
                                                                                                                                                          InterPro; IPR000704; CAS_kinase_II.
Pfam; PF01214; CK_II_beta; 1.
PRINTS; PR00472; CASNKINASBII.
                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced throu between the Swiss Institute of Bioinformatics and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=5141;
                                                                                                                                                                                                      EMBL; AF494377; AAM14625.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NEUCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                187 EEDEEDEED 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         293
                           293 EEDEEDEED 301
89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 9; Conserv
                                                    Similarity
9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EEDEEDEED
BEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
8
94
185
214 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                       16:994-1006(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
78
162
214
24785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                   2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 9;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HMG BOX 1.
HMG BOX 2.
ASP/GLU-RICH (ACIDIC)
                                                                    Score 9; 1
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B29C8A32D8D2C933 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                       Mismatches
                                                                                                                                                                                                                                                                                                                  It is produced through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                333 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
o. 0.54;
                                                                    DB 1;
). 0.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                       0
                                                                                 Length 333;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                    EMBL outstation
                                                                                                                                                                                                                                                                                                          a collaboration -
MBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                          0
```

```
YKL8 YEAST
ID YKL8 Y EAST
ID YKL8 Y 10-JUN
DT 01-JUN
DT 16-OCT
DE Hypoth
GN YKL088
OK Saccha
OC Saccha
OC Saccha
OX NCBL1
RP SEQUEN
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches
                                                                                                       P36076;
01-JUN-1994
01-JUN-1994
16-OCT-2001
                                 Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; Saccharomycetales; Saccharomycetales; Saccharomycetales; Saccharomycetales; Saccharomycetales; Saccharomycetales; Saccharomycetales; Saccharomycetales; Saccharomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWI
between
                                                                              Hypothetical YKL088W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=91080155; PubMed=2124273; Fryberg E.A., Fryberg C.C., Beall C., Saville D.L.; "Drosophila melanogaster troponin-T mutations engender three distinct syndromes of myofibrillar abnormalities."; J. Mol. Biol. 216:657-675(1990).

-!- FUNCTION: Troponin T is the tropomyosin-binding subunit of troponin, the thin filament regulatory complex which confers calcium-sensitivity to striated muscle actomyosin ATPase activity. Mutations in troponin T engender three distinct syndromes of myofibrillar abnormalities.
 SEQUENCE FROM N.A
                         NCBI_TaxID=4932;
                                                                                                                                                                                                                                                                                                                                                                                                                             PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license among.
                                                                                                                                                               YKI8_YEAST
                                                                                                                                                                                                                                                                                                                                                                                             FlyBase; FBgn0004169; up.
InterPro; IPR001978; Troponin.
                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                            Muscle protein.
DOMAIN 341
                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=Canton-S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REVISIONS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Asynchronous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Troponin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fyrberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=89141761; PubMed=2852258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-MAR-2004
Troponin T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY: Belongs to the troponin T family.
                                                                                                                                                                                                                                                                                                                                                                                                                           S13251; S13251
                                                                                                                                                                                                                                                                                                                                                                                  PF00992; Troponin;
                                                                                                                                                                                                                                                                                                                                                                                                                                       X54504; CAA38366.1;
                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B., L
                                                                                                                                                                                                                                                           EEDEEDEED 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Biol.
                                                                                                                                                                                                                                  EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                            396 AA;
                                                                                           (Rel.
(Rel.
(Rel.
(Rel.
1 65.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          melanogaster
                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Leonard K., Larkins A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Rel. 43, Last annotation update) skeletal muscle (Upheld protein)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       asynchronous flight
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          204:621-637(1988).
                                                                                                                                                             STANDARD;
                                                                                           29,
29,
40,
kDa
                                                                                                                                                                                                                                                                                2.2%; bu
100.0%; Pr
                                                                                                                                                                                                                                 366
                                                                                                                                                                                                                                                                                                                                                         396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FROM
                                                                                                                                                                                                                                                                                                                                          47333 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             muscle;
                                                                                        Last sequence update)
Last annotation update)
protein in MIF2-CYT2 in
                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N.A.
                                                                                                                                                                                                                                                                                   Score 9; DB 1; Pred. No. 0.9
                                                                                                                                                                                                                                                                                                                                          ASP/GLU-RICH (HIGHLY ACIDIC)
; 3CAAA8AAA8943C23 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       muscle.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Butcher G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            noved. Usage by and for commercial
  (See http://www.isb-sib.ch/announce/
                                                                                                                                                            ΑĀ
                                                                                                                                                                                                                                                                                              1;
                                                                                       intergenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Intended thorax
                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                              Length 396;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Karlik
                                                                                       region
                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         no
                                                                                                                                                                                                                                                                                0
```

```
HRGPLAND DE LACE COCCOCCE PRESENTARIA NO COCCOCCE PRESENTARIA PRES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                            MEDLINE-55198731; PubMed=7891706;
MEDLINE-55198731; PubMed=7891706;
MCOLINE-55198731; PubMed=7891706;
MCOLINE-55198731; PubMed=7891706;
MCOLINE-55198731; PubMed=7891706; Rush Courcio M., Clarke V., Oppenheim J.D., D'Bustachio P., Rush Separate domains of the Ran GTDase interact with different for regulate nuclear protein import and RNA processing.";
MOI. Cell. Biol. 15:2117-2124(1995).
-!- FUNCTION: GTPase activator for the nuclear Ras-related reprotein Ran, converting it to the putatively inactive GDE state. Required for postimplantation development.
-!- SUBUNIT: Homodimer. Forms a tight complex in association (Rush Courcille Protein Ran, Converting at the complex in association of the courcille of the courcille of the complex in association of the courcille o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P46061; Q60801;
01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Ran GTPase-activating protein 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genes
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIINE=94148219; PubMed=8314081;
Degregori J., Russ A., von Melchner H., Rayburn H.,
Priyaranjan P., Jenkins N.A., Copeland N.G., Ruley
"A murine homolog of the yeast RNA1 gene is require
postimplantation development.";
Genes Dev. 8:265-276(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN=BALB/c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RANGAP1 OR FUG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RGP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; Z28088; CAA81926.1;
PIR; S37913; S37913.
HSSP; Q9SWE5; 1E20.
GermOnline; 139844; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for contenting the statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pohl T.M., Pohl F.M.;
Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: TO YEAST AND C.TROPICALIS SIS2/HAL3. SOW
A.THALIANA HAL3A AND HAL3B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical protein 50MAIN 508 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF02441; Flavoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entities requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3GD; S0001571; YKL088W.
InterPro; IPR003382; Flavoprotein.
                                                                 PTM:
                                                                              similarity).
SUBCELLULAR LOCATION: Cytoplasmic (By similarity)
                             PTM: Sumoylated SIMILARITY: Cont
                                                                                                                                                     RANBP2 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           l Similarity
9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          571 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                            the ubiquitin-conjugating
                             Contains 6 leucine-rich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
To fungal RNA1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    570 A
65238 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 9; D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ASP/GLU-RICH (HIGHLY ACIDIC)

; 9C674C2394EFCEAB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Ver'
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vertebrata; Euteleostomi;
thi; Muridae; Murinae; Mus
                             (LRR)
                                                                                                                                                  enzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , Ruley H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 571;
                                                                                                                                               n association
E2 (UBC9) (B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOME,
                                                                                                                                                                                                                                             GDP-bound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   yh a collaboration EMBL outstation -
                                                                                                                                               γB)
                                                                                                                                                                                                                                                                       regulatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or
                                                                                                                                                                                                                                                                                                                                                                   factors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                   ጃ
ብ
                                                                                                                                                                               with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ПО
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
RESULT
CENB_CR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                          01-FEB-1996
01-FEB-1996
15-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REPEAT
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIR;
PIR;
PDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                         MEDIJIE-96354058; PubMed=8652663;

Bejarano L.A., Valdivia M.M.;

Meoleular cloning of an intronless gene for the hamster ce antigen CEMP-B.";

Biochim. Biophys. Acta 1307:21-25(1996).

-!- FUNCTION: Interacts with centromeric heterochromatin in chromosomes and binds to a specific subset of alphoid s DNA, called the CENP-B box. May organize arrays of cent satellite DNA into a higher order structure which then centromere formation and kinetochore assembly in mammal
                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                      Cricetulus griseus (Chinese hamster)
Eukaryota; Metazoa; Chordata; Crania
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRIGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTPase activation; Repeat; Leucine-rich repeat; 3D-structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00560; LRR;
                                                                                                                                                                                                                                                                                                                                                                Major centromere
                                                                                                                                                                                                                                                                                                                                                                                                                   P48988;
                                                                                                                                                                                                                                                                                                                                                                                                                                    CENB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPEAT
              This
                                                                                                                                                                                                                                        TISSUE=Ovary
                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                             NCBI_TaxID=10029;
                                                                                                                                                                                                                                                                                             Cricetulus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MGI:103071; Rangap1.
xPro; IPR001611; LRR.
xPro; IPR007091; LRR_RNinh.
                                                       SUBUNIT: Homodimer (By similarity).
SUBCELLULAR LOCATION: Nuclear.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; U08110; AAA17681.1; -.; U20857; AAB60517.1; -. A36983; A36983. T52070; T52070.
                                        SIMILARITY: Contains 1 CENPB domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1KPS; 13-FEB-02.
                                                                                  chromosomes (By similarity)
SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                   CRIGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EEDEEDEED 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                            (Rel. 33, (Rel. 33, (Rel. 43,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             111
207
235
235
292
320
359
181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                             . 33, Last sequence update)
. 43, Last annotation update)
autoantigen B (Centromere protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
230
258
315
343
399
181
                                                                                                                                                                                                                                                                                                          Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LRR 1.
LRR 2.
LRR 3.
LRR 4.
LRR 5.
LRR 5.
LRR 6.
ASP/GLU-RICH (HIGHLY ACIDIC).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 9; I
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -> A (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60FAA68B60E9669C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                      606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 589;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                  mammalian
                                                                                                                                                                                                                                                                                                                                                                   (CENP-B)
                                                                                                                            centromere
                                                                                                                                                                                                 centromere
                                                                                                                                         satellite
                                                                                                                 directs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

```
RESULT
ECM2_HU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOOP TITLE
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      094769;
28-FEB-2003
28-FEB-2003
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute. There are no restrictions on its good by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSSP;
                                                                                                                                                                                                                                                                                  MEDITNE=9900324; PubMed=9790758;
MEDITNE=9900324; PubMed=9790758;
Nishiu J. Tanaka T., Nakamura Y.;
"Identification of a novel gene (ECM2) encoding a putative extracellular matrix protein expressed predominantly in adipose femala-specific tissues and its chromosomal localization to 9q22 Genomics 52:378-381(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chromosomal protein; Nuclear protein; DNA-binding; Centromere.
DNA BIND 1 125
BY SIMILARITY.
DOMĀIN 404 471
GLU-RICH (ACIDIC).
DOWAIN 510 545
ASP/GLU-RICH (ACIDIC).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR004875; CENP-B.
InterPro; IPR006695; CENP-B.N.
InterPro; IPR006600; CENPB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; U20951; AAB06494.1; -.
                                                                                         This SWISS-PROT entry is copyright. It is produced through a collable between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for conmodified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SC1/ECM2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ECM2_HUMAN
              MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Extracellular
               Genew; HGNC:
MIM; 603479;
                                                                                                                                                                                                                                                       -!- SUBCELLULAR LOCATION: Secreted, extracellular matrix.
                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                        EMBL; AB011792; BAA33958.1;
                                                                   or send an
                                                                                 entities requires a license
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                          SIMILARITY: Belongs to the small leucine-rich proteoglycan family. Class I subfamily.
SIMILARITY: Contains 1 VWFC domain.
SIMILARITY: Contains 12 leucine-rich (LRR) repeats.
                                                                                                                                                                                                                                            well as female-specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S70358; S70358.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PF04218; CENP-B_N; 1.
PF03184; DDE; 1.
; SM00674; CENPB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P07199; 1BW6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
9; Conserv
                            HGNC:3154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       606 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Rel. 41, Created)
(Rel. 41, Last sequence update)
(Rel. 41, Last annotation update)
(Rel. 41 Drotein 2 precursor (Mat
                                                                    email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₩.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                agreement (See http://www.isb-sib.ch/announce,
                                                                                                                                                                                                                                              organs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 9;
                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 1.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63D0EEEE5551D48E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                              such as mammary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ĭ. DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Matrix glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ACIDIC).
51D48E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                             gland, ovary,
                                                                                                                                           a collaboration
                                                                                                                                                                                                                                                                                                     9q22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                        outstation
                                                                                                                                                                                                                        (SLRP)
                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                   and
                                                                                                   commercial
                                                                                                                og
                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

C:extracellular matrix;

```
CCC 1-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO; GO:0005178; F:integrin bind
GO; GO:0007160; P:cell-matrix a
InterPro; IPR001611; LRR.
InterPro; IPR003591; LRR typ.
InterPro; IPR001007; VWF C.
Pfam; PF000560; LRR; 10.
Pfam; PF00093; VWC; 1.
                                                                          "Isolation and characterists.";
malaria parasite Plasmodium falciparum.";
Mol. Biochem: Parasitol. 64:25-32(1994).

-!- FUNCTION: Implicated in mitochondrial protein import and macromolecular assembly. May facilitate the correct folding of imported proteins. May also prevent misfolding and promote the refolding and proper assembly of unfolded polypeptides generated under stress conditions in the mitochondrial matrix.

-!- SUBCELLULAR LOCATION: Mitochondrial matrix (By similarity).
                                                                                                                                                                                                                                                                                                                             01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
Chaperonin CPN60, mitochondrial precursor.
Plasmodium falciparum (isolate FCR-3 / Gambia).
Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI TaxID=5838;
                                                                                                                                                                                                                                  SEQUENCE FROM N.A.

MEDLINE=94359534; PubMed=7915821;
Holloway S.P., Min W., Inselburg J.I.;
"Isolation and characterization of a chaperonin-60"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
SEQUENCE
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CH60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLAFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REPEAT
REPEAT
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
DOMAIN
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Signal SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PRO0019; LEURICHRPT.
SMART; SM00214; VWC; 1.
PROSITE; PS01208; VWFC_1; 1.
PROSITE; PS50184; VWFC_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P34940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Leucine-rich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                     SUBCELLULAR LOCATION: Mitochondrial matrix (By simila SIMILARITY: Belongs to the chaperonin (HSP60) family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO:0005178; F:integrin binding; TAS.
GO:0007160; P:cell_matrix adhesion; TAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLAFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat; Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        158
158
355
379
405
426
426
426
620
643
672
281
296
643
306
809
79789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                k; Score 9; DB 1
k; Pred. No. 1.5
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VWFC:

LRR-S 1.

LRR-T 1.

LRR-T 2.

LRR-T 3.

LRR-T 4.

LRR-T 5.

LRR-T 6.

LRR-T 7.

LRR-T 7.

LRR-T 7.

LRR-T 1.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MATRIX PROTEIN 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Extracellular matrix;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ٠,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 699;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 (POTENTIAL).
.) (POTENTIAL).
.) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
밁
                                                                       Š
                                                                                                                                                                                                                                                                                                            SO PIT OF THE COLOR OF THE COLO
                                                                                                                                                      Matches
                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                 Interry,
Interpro; IPR00855,
Interpro; IPR00855,
Interpro; IPR00118; cpn60 TCP1; 1.
Pfam; PPF00118; cpn60 TCP1; 1.
PRINTS; PR00298; CHAPERONINGO.
PRINTS; PR00304; TCOMPLEXTCP1.
PROSITE; P800296; CHAPERONINS CPN60; FALSE NEG.
Chaperone; ATP-binding; Transit peptide; Mitochondrion; Heat shock.
Chaperone; ATP-binding; Transit peptide; Mitochondrion; Heat shock.
TRANSIT 1 9 MITOCHONDRION (POTENTIAL).
TRANSIT 10 700 ASP/GLU-RICH (HIGHLY ACIDIC).
AEIDB362B666D382 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X75420; CAA53172.1; -. PIR; S38426; S38426.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001844;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP; P06139; 1GRL
   674
                                                                           293
                                                                                                                                                  Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   non-profit institutions as long as its content
       EEDEEDEED
                                                                              EEDEEDEED
                                                                                                                                                      Conservative
                                                                           301
682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Chaprnin Cpn60.
; Cpn60/TCP-1.
; GroEL-ATPase.
0_TCP1; 1.
                                                                                                                                                                                             100.0%;
                                                                                                                                                      0
                                                                                                                                                                                         Score 9;
Pred. No.
                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                         . DB
                                                                                                                                                                                         .
6 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Usage
                                                                                                                                                      0;
                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               λq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g,
                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ë
                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   commercia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       no
                                                                                                                                                  0;
```

Search completed: July 22, 2004, 16:54:39 Job time: 15 secs

This Page Blank (uspto)

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying
                                                                                                                                                                                                                                                               Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                           Word size :
                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     on:
 SPTREMBL 25:*

1: sp_archea:*
2: sp_bacteria
3: sp fungd:*
4: sp_human:*
5: sp_invert
6: sp_mamma'
7: sp_mhc:*
8: sp_orga
9: sp_pha'
10: sp_p
11: sp_r
12: sp_r
13: sp_r
14: sp
15: sp
16: sp
17:
                                                                                                                                                                                                                                                                                        seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                      OLIGO
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-831-804-3
412
1 MSESDETKSISSLISSSSSSS......PLVKKARMDLLPNETSVISR 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 July 22,
                                                                                                                                                                                                                                                                                                                                                                              1017041 seqs, 315518202 residues
: sp archea:*
: sp_bacteria:*
: sp_fungi:*
: sp_human:*
: sp_human:*
: sp_mammal:*
: sp_mhc:*
: sp_mhc:*
: sp_organelle:*
: sp_organelle:*
: sp_ordant:*
: sp_virus:*
: sp_virus:*
: sp_virus:*
: sp_virus:*
: sp_bacteriap:*
: sp_bacteriap:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2004, 16:51:37; Search time 45 Seconds (without alignments) 2888.744 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                              chosen parameters:
                                                                                                                                                                                                                                                                                                                              1017041
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

F	ם ב	1 1	1 5	1.2	11	10	,	. ~	, ~	١٥	ı UT	4.1	. ن) N	ц	No.	Result	
v	o ve	o ve	o v	ט ע	9 6	9	. 6	9	. 6	6	9	10	TO	10	10	Score		
					2.2										2.4	Match	Query	₩
4 U U	417	390	282	372	354	215	215	215	211	208	163	6473	798	546	546	Length		
L	4, 4	L	10	10	11	11	11	11	4	11	11	ທ	U	11	11	BB		
Q06523	Q86YR3	68,406.0	Q38809	Q9SZI2	Q8BIJ2	Q9QX40	9AMÖ6Ö	088612	Q9NQJ4	TZXOBÖ	Q8BIC5	QBIKH9	045181	Q8VEN0	Q61491	ID		
Q06523 saccharomyc	Q86yr3 homo sapien	Q9dfb9 ictalurus p	Q38809 arabidopsis	Q9szi2 arabidopsis	Q8bij2 mus musculu	Q9qx40 spalax leuc	Q9qwy6 spalax leuc	O88612 spalax leuc	Q9nqj4 homo sapien	Q80yz1 mus musculu	Q8bic5 mus musculu	Q8ikh9 plasmodium	O45181 caenorhabdi	Q8ven0 mus musculu	Q61491 mus musculu	Description		

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
89	80	œ	œ	œ	00	æ	œ	œ	9	9	9	9	9	9	9	9	ø	9	9	9	9	9	9	9	9	9	9	9
	1.9	٠				1.9		•								2.2						٠		2.2	٠			2.2
180	176	176	159	119	116	106	77	76	2075	1404	1312	1127	1012	792	775	775	774	774	707	702	693	639	639	589	589	589	5 75	518
ы	2	Ν	17	10	11	11	16	N	υī	щ	w	υı	16	12	11	11	11	11	11	υı	4	μ.	4.	11	11	11	ហ	11
Q9AL03	Q848T9	Q9EZB9	Q9YD24	Q94I90	Q9DAB6	Q9D822	Q8YP97	P72352	Q8IHR5	Q08757	Q8WZV2	Q8IS17	Q7ULN3	Q9YTL7	Q8BFQ7	Q9D6C5	Q8BT18	Q8R1Q5	Q99K50	Q8I0V3	Q7Z3D0	QBIUR6	Q8IZG1	Q7TMW1	Q8C2E3	Q91YS2	Q8I205	88M08Ö
w		staphylococ		റ	Bum	Q9d822 mus musculu	7		Q8ihr5 plasmodium	J		Ф	rhodopin	\vdash	Bum	mus	mus	mus	0	plasm	homo	homo	homo	mus			plasm	Q80w88 mus musculu

ALIGNMENTS

```
RESULTING REPUBLIC RESULTING REPUBLIC R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         So
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0048; ZINCFINGER.

PRODOM; PRO00003; ZDE C2H2; 10.

SMART; SM00349; KRAB; 1.

SMART; SM00349; KRAB; 1.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS508057; ZINC FINGER C2H2 1; 13

PROSITE; PS50877; ZINC; FINGER C2H2 2; 14

Metal-binding; Zinc; Zinc-finger.

SEQUENCE 546 AA; 63973 MW; 092E26055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q8VENO;
Q8VENO;
01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                           045181
045181;
01-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Similar to zinc finger protein 97.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; BC018101; AAH18101.1; -. GO; GO:0005622; C:intracellular; IEA. GO; GO:0003676; F:nucleic acid binding; IEA. GO; GO:0006355; P:regulation of transcription,
                                                                                                                                                                                                        Hypothetical K07H8.10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00352; KRAB; 1.
Pfam; PF00096; zf-C2H2; 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001909;
InterPro; IPR007087;
InterPro; IPR007086;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse)
                                                                                                                                    Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                    01-JUN-1998
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF01352; KRAB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10090;
                                              STRAIN=Bristol N2;
                                                                        SEQUENCE FROM N.A.
                                                                                                             NCBI_TaxID=6239;
                                                                                                                                                                                     Caenorhabditis elegans.
                           MEDLINE=99069613;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N
                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               505 LKRHEITHTK 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100 LKRHEITHTK 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100 LKRHEITHTK 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                       LKRHEITHTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (DEC-2001) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         546
                                                                                                                                                                                                                                                  3 (TrEMBLrel. 06, 03)
3 (TrEMBLrel. 25, 03)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                               protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                           PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64148 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zīnc-finger.
63973 MW; 092E26D554609D5D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Znf_C2H2.
Znf_C2H2_sub.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KRAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                    Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 10; Pred. No.
                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 10;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BEA735BAF5C5528B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    546
                                                                                                                                                                                                                                                                                                                                               798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 11;
0.58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA-dependent; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 546;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 546;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
RESULT
Q8IKH9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SO DRAP DRAFT
                                                                 A DE RESTRES DE RESTRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8IKH9;
01-MAR-2003
01-MAR-2003
01-JUN-2003
01-JUN-2003
Dynein beta c
pF14_0626.
                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=3D7;
STRAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Science
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00076; rrm; 2.
SMART; SM00360; RRM; 2.
PROSITE; PS50102; RRM; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WormPep; K07H8.10; CE18030.
GO; GO:0003676; F:nucleic ac:
InterPro; IPR000504; RNA_rec_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Direct Submission.";
Submitted (AUG-2001) to the
EMBL; AF047659; AACO4430.1;
PIR; T33022; T33022.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "The sequence of C. elegans
                                                                                                                                                Nature 419:498-511(2002).

EMBL; AE014826; AAN37239.1; -.

GO; GO:0030286; C:dynein complex; IEA.

GO; GO:0008567; F:dynein AFPase activity; IEA.

GO; GO:0003777; F:microtubule motor activity;

GO; GO:0007018; P:microtubule-based movement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Alveolata;
NCBI_TaxID=36329;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QBIKH9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Waterston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=Bristol N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "The sequence of C. (
Submitted (FEB-1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. STRAIN=Bristol N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            investigating biology. The C
Science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Genome sequence of the nematode C. elegans: a platform for investigating biology. The C. elegans Sequencing Consortium.";
                                                    SECULENCE 6473 AA; 771748 MW; BI
                                                                                                                                                                                                                                                                                                                                                                                                              Venter J.C., Carucci D.J., Hoffman S.L., Fraser C.M., Barrell B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hypothetical protein
                                                                                                                                                                                                                                                                                                                                                   falciparum.";
                                                                                                                                                                                                                                                                                                                                                                             Genome sequence of the human malaria parasite Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           292 VEEDEEDEED 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VEEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             798 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86819 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Apicomplexa; Haemosporida; Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (isolate 3D7)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gattung S., Wohldmann P., Elliott egans cosmid K07H8."; o the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23, Created)23, Last sequence update)24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acid binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mot.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 10;
Pred. No.
   Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6209063CD13FAB26 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                 BFC848CD45D5D2F8 CRC64;
   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 5;
0.82;
   DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ã
   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                 IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 798;
   Length 6473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Elliott
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .T., James K.,
S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

0

Local

.0%;

Pred. No.

```
RESULT QBOYLE QB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGD; MGI:2143362; BLL.
MGD; MGI:2143362; BLL.
InterPro; IPR007087; Znf C2H2.
Pfam; PF00096; Zf-C2H2; 5.
SMART; SM00355; ZnF C2H2; 5.
PROSITE; PS00028; ZINC_FINGER_C2H2_1; 5.
PROSITE; PS50157; ZINC_FINGER_C2H2_2; 5.
PROSITE; PS50157; ZINC_FINGER_C2H2_2; 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loc
Matches
                                                                                                                                                                                                                         Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                               North P., Leaves N., Grey Russell E., Smith M., Sti Hunter G., Kimberley C., Botcherby M.R.M.;
                                                                                                                                                                                                                                                                                                                                                                                                       080XZ1;
                                                               EMBL;
                                                                                 Submitted
                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=22354683; PubMed=12466851;
The FANTOM Consortium,
The RIKEN Genome Exploration Research Group Phase I & II Team;
"Analysis of the mouse transcriptome based on functional annotation 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
MATURE 420:563-573(2002).
EMBL; AK089532; BAC40916.1; -.
MGD; MGI:2143362; BB114266.
INTERPTO; IRR007087; Znf_C2H2.
                                                                                                                                                                                                                                                                                             BM168F16.1
                                                                                                                                                                                                                                                                                                                            BM168F16.1
                                                                                                                                                                                                                                                                                                                                                  01-JUN-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8BIC5
Q8BIC5;
01-MAR-2003
                                                                                                                                                                                                                                                                                                              (Hmgb1)
                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N
STRAIN=C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2003 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
01-OCT-2003 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Weakly similar to BA393J16.3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
 Bbmitted (FEB-2003) to the EMBL; AL670999; CAD83017.1; -.; GC:0000785; C:chromatin; ID; GO:0005634; C:nucleus; IEA; GC:0003677; F:DNA binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 100
10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KAFFRKSHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VEEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VEEDEEDEED
                                                                                                                                                                                                                                                                                                                          (Novel protein
                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel. 24, )
(TrEMBLrel. 24, )
(TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        72
                                                                                                            , Greystrong J.,
., Strachan G., T
y C., Thomas D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
binding; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25,
                 IEA.
                                                                                                                                                                                                                                                                                                                          similar to
                       IEA.
                                                                     EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                        Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 9;
Pred. No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last
                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>,</u>
                                                                                                                                                                                                                           Craniata; Vert
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; | Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlABFD2BCD74C044 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence update)
                                                                                                                            Coppola M., Manjunath
Tofts C., Boal E., Cob.
                                                                                                            Cave-Berry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.
                                                                                                                                                                                                                                                                                                                                                                                                                       208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ហ្ស
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 11;
                                                                                                                                                                                                                       Vertebrata; Euteleostomi;
bhi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5.2;
                                                                                                                                                                                                                                                                                                                                                                                                                       À
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                            ۲.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                            Weston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                      group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
; Murinae; Mus.
                                                                                                                              Cobley
                                                                                                                                                                                                                                                                                                                        Xod
                                                                                                                            ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                           Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
```

```
RESULT 7
Q9NQJ4
ID Q9NQ
AC Q9NC
DT 01-C
DT 01-C
DT 01-C
DT 02-C
DT 02-
      AAC COOR BET DACE
                                                                                                                                                                                                                            RESULT
088612
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DR DR DR DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AL160176; CAB92731.1; -.
HSSP; P07155; 1HMF.
G0: G0:0000785; C:hromatin; IEA.
G0: G0:0005635; C:nucleus; IEA.
G0: G0:0005637; F:DNA binding; IEA.
G0: G0:0003677; F:DNA binding; IEA.
G0: G0:0006335; P:regulation of transcription, DNI
InterPro; IPR000135; Highmoblty 12.
InterPro; IPR000135; Highmoblty 12.
InterPro; IPR000135; Highmoblty 12.
                                                                              O88612; PRELIMINARY;
O88612; O1-NOV-1998 (TrEMBLrel. 0
O1-NOV-1998 (TrEMBLrel. 0
O1-CCT-2003 (TrEMBLrel. 2
O1-CCT-2003 (TrEMBLrel. 2
High mobility group prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
            Spalax leucodon ehrenbergi (Ehrenberg's mole rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
Nannospalax.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00505; HMG_box; 2. —
PRINTS; PR00886; HIGHMOBLTY12.
SMART; SM00398; HMG; 2.
PROSITE; PS50118; HMG_BOX_2; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GO; GO:0006355; P:regulation of transcription, DNA-dependent; IEA. InterPro; IPR000135; Highmoblty_12.
InterPro; IPR000910; HMG_12_box.
Pfam; PF00505; HMG_box; 2.
PRINTS; PR00886; HIGHOBLTY12.
SMART; SM00398; HMG; 2.
PROSITE; PS00353; HMG_BOX_1; 1.
PROSITE; PS00353; HMG_BOX_2; 2.
PROSITE; PS50118; HMG_BOX_2; 2.
SEQUENCE 208 AA; 23811 MM; 4DBCB7B9516D7B52 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (FEB-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Howden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HMG1L1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-2000 (TrEMBLrel. 19
01-OCT-2003 (TrEMBLrel. 29
01-579-20.1 (High-mobility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9NQJ4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29NQJ4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             l-like 1).
                                                                                                                                                                                                                                                                                                             188
                                                                                                                                                                                                                                                                                                                                                   293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                שי
                                                                                                                                                                                                                                                                                                                                                                                         Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                           EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                 EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          211
                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2.2%; Scilarity 100.0%; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                                                                                                                                                                                                           196
                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MG_BOX_2; 2
24238 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Primates;
                                                                                                                                                                                                                                                                                                                                                                                                        2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        to
                                                                                                                    08,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5, Created)
5, Last sequence update)
5, Last annotation update)
5, Last annotation chromosomal) protein
                                                                                                                Last sequence up
                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 9; DB 1:
; Pred. No. 2.4
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                        Score 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ν.
          Craniata; Vert
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   D2623FDE00FA8355 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                     sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                           9;
                                                                                                                                                                                                                                                                                                                                                                                                          No.
                                                                                                                                                                                                   215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               211
                                                                                                                                                                                                                                                                                                                                                                                                        DB
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11;
). 2.4;
                                                                                                                                                                                                   AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hominidae;
              Muridae;
                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                                                           Length 211;
                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA-dependent;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 208;
                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                    Euteleostomi;
              Spalacinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IEA.
                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
RESULT

OPEN

OPEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
밁
                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 9
                                                                                         Matches
                                                                                                                 Best
                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                Lee K.-L.D., Lum H.-K., Nevo E.;
"HMG1 Genes from the Mole Rat Spalax ehrenbergi.";
Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AR078819; AAC27652.1; -.
HSSP; P07156; LNHN.
GO; GO:0000785; C:chromatin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COOMAC ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP; P07156; INHN. GO; GO: 0000785; C:c GO; GO: 0005634; C:n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PR00886; HTGHMOBLTY12.
SMART; SM00398; HMG; 2.
SROSTIE; PS50118; HMG BOX 2; 2.
SEQUENCE 215 AA; 24923 MW; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lee K.-L.D., Lum H.-K., Nevo E.;
"HMG1 Genes from the Mole Rat Spalax ehrenbergi.";
Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AF078818; AAC27651.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=30637;
[1]
                                                                                                                                                                                                                                                                                      GO; GO:0000785; C:chromatin; IEA.
GO; GO:0005634; C:nucleus; IEA.
GO; GO:0003677; F:DNA binding; IEA.
GO; GO:0006355; P:regulation of transcription,
InterPro; IPR000135; Highmobity 12.
InterPro; IPR000910; HMG 12 box.
PHAM: PP00505; HMG box; 2.
                                                                                                                                                                              PRINTS; PRO0886; HIGHWOBLTY12.

SMART; SM00398; HMG; 2.

PROSITE; PS00353; HMG BOX 1; 1.

PROSITE; PS50118; HMG BOX 2; 2.

SEQUENCE 215 AA; 24822 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HMG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High mobility group protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-MAY-2000
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Spalacinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Spalax leucodon ehrenbergi (Ehrenberg's mole rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                 Local
    188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
9; Conserv
                                                                                       l Similarity
9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EEDEEDEED 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EEDEEDEED 301
                                               REDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel. 13, Created)
(TrEMBLrel. 13, Last sequence update)
(TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.2%; sur
v 100.0%; Pr
                                               301
    196
                                                                                    100.0%; PI
                                                                                                                                           2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 9;
; Pred. No
                                                                                         Score 9; DB 1; Pred. No. 2.5
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1C6FB6845CA1E6C8 CRC64;
                                                                                                                                                                                        D20D659274B575B4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 11;
                                                                                                                   DB 11;
5. 2.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 215;
                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                      DNA-dependent; IEA
                                                                                                                                           Length 215;
                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                   0;
```

RESULT

10

```
SOURCE BEAUTHOUS STREET OF STREET OF
QBBIUT 11
QBBIU
QBBIU
QBBIU
DBIU
DBIU
DC 01-M2
DT 01-M2
DT 01-M2
DT 01-M3
DC MAMMA
GN BB114
GN BB144
GN CEBI
RN CEBI
R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9QX40;
Q9QX40;
01-MAY-2000
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP; P07156; INHN.
GG; GO:0000785; C:chromatin; IEA.
GO; GO:0005634; C:nucleus; IEA.
GO; GO:0003677; F:DNA binding; IEA.
GO; GO:000355; P:regulation of transcription,
GO; GO:0006355; Pighmoblty_12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-2000 (TrEMBLrel. 01-OCT-2003 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lee K.-L.D., Lum H.-K., Nevo E.;
"HMG1 Genes from the Mole Rat Spalax ehrenbergi.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF078820; AAC27653.2; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Spalax leucodon ehrenbergi (Ehrenberg's mole rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Spalacinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         High mobility group protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPRO00135; Highmoblty_
InterPro; IPR000910; HMG 12_box.
Pfam; PF00505; HMG box; 2.
PRINTS; PR00886; HIGHMOBLTY12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00353; HMG_BOX_1; 1.
PROSITE; PS50118; HMG_BOX_2; 2.
SEQUENCE 215 AA; 24895 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PR00886; HTGF
SMART; SM00398; HMG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=30637;
                                                                                          EMBL, AK049344; BAC33696.1; -.
MGD; MGI:2143362; BB114266
GO; GO:0005522; C:intracellular; IEA.
GO; GO:000576; F:nucleic acid binding; IEA.
GO; GO:0006355; P:regulation of transcription,
Interpro; IPR001909; KRAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nannospalax
                                                                                                                                                                                                                                                                                                              the RIKEN Genome Exploration Research Group "Analysis of the mouse transcriptome based o 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                    InterPro;
Pfam; PF01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BB114266.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Weakly similar to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8BIJ2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8BIJ2
                                                                                                                                                                                                                                                                                                                                                                                                                                                       The FANTOM Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           293
   PF00096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           l Similarity
9; Conserva
                                       PF01352;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EEDEEDEED 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EEDEEDEED
                                       IPR007087; Znf_C2H2.
1352; KRAB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BA393J16.3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13,
13,
25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 9;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               599FB8A6FDF41F17 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          215 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 11;
o. 2.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA
                                                                                                                                                                                                                                                                                                                                                                                              lp Phase
l on func
                                                                                                                                                                                                                                                                                                                                                                                              hase I & II Team; functional annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA-dependent;
                                                                                                                                                       DNA-dependent; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                         of.
```

0

```
RP SEQUENCE FROM N.A.

Southwick A., Karlin-Neumann G., Nguyen M., Lam B., Miranda M., RA Palm C.J., Bowser L., Jones T., Banh J., Carninci P., Chen H., RA Palm C.J., Bowser L., Jones T., Banh J., Carninci P., Chen H., RA Cheuk R., Chung M.K., Hayashizaki Y., Ishida J., Kamiya A., Kawai J., Kaim C., Lin J., Liu S.X., Narusaka M., Pham P.K., Sakano H., Kavai J., Sakurai T., Satou M., Seki M., Shinn P., Yamada K., Shinozaki K., Sakurai T., Theologis A., Davis R.W.;

Ra Bcker J., Theologis A., Davis R.W.;

Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.

BMBL; AL049483; CAB39676.1; -.

RMBL; AL049483; CAB39676.1; -.

RMBL; AV054484; PAR96675.1; -.

RMBL; AV054849; PAR96675.1; -.

RMBL; AV054849; PAR96675.1; -.

RMBL; AV054849; PAR96675.1; -.

RMBL; AV054849; PAR96675.1; -.

RMBL; AV05484; PAR96675.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SQ DR DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 9
                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.

SOUTHWICK A., KARIIN-Neumann G., Nguyen M., Lam B., Miranda M.,

Southwick A., Kariin-Neumann G., Nguyen M., Lam B., Miranda M.,

Palm C.J., Bowser L., Jones T., Bahh J., Carninci P., Chen H.,

Cheuk R., Chung M.K., Hayashizaki Y., Ishida J., Kamiya A., Kawai

Kim C., Lin J., Liu S.X., Narusaka M., Pham P.K., Sakano H.,

Sakurai T., Satou M., Seki M., Shinn P., Yamada K., Shinozaki K.,

Boker J., Theologis A., Davis R.W.,

Boker J., Theologis A., Davis R.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
EU Arabid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. Rose M., Hempel S., Submitted (MAR-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bevan M.,
Mayer K.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
EU Arabidopsis sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embry
Spermatophyta; Magnoliophyta; eudicotyledons;
eurosids II; Brassicales; Brassicaceae; Arabi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OSSZI2; PRELIMINARY;
OSSZI2; CTEMBLEEL 13,
O1-MAY-2000 (TEMBLEEL 13,
O1-MAY-2000 (TEMBLEEL 13,
O1-OCT-2003 (TEMBLEEL 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMART; SM
SMART; SM
PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.

Bevan M., Rose M., Hempel S.,

Mayer K.F.X., Schueller C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nucleosome assembly protein F20B18.220 OR AT4G26110.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=3702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arabidopsis sequencing project;
bmitted (MAR-2000) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis sequencing project; mitted (MAR-1999) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SM00349;
SM00355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS50805; KRAB; 1.
PS50805; KRAB; 1.
PS00028; ZINC_FINGER_C2H2_1; 7.
PS50157; ZINC_FINGER_C2H2_2; 7.
PS50157; ZINC_FINGER_C2H2_3DEA421B43B4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KAFFRKSHL
                                                                                                                                                                                                                                                                                                             (AUG-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KAFFRKSHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (MAR-1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KRAB; 1.
ZnF_C2H2; 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Entian K
) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      K.-D., Mewes H.W.,
e EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
I-like protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 9; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Entian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     K.-D., Hoheisel J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 11;
5. 3.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Embryophyta; Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lemcke K.,
databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 core eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mayer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mewes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rosids;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Х.
Ч
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                  ۲.
                                                                                                                                                                                                                                                                                                                                                                                   ٦.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
RESULTAT
Q9DFB9
ID Q9
AC Q9
DT 01
DT 01
DT 01
DT 01
DT 02
CO BAC
OC BAC

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
Q38809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SQ DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                   SEQUENCE FROM Barker K.S., Clem L.W.;
  "Catfish myc oncogene.";
Submitted (JUN-2000) to
-!- SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PI
                                                                                                                                                                                                                Ictalurus punctatus (Channel Bukaryota; Metazoa; Chordata; Actinopterygii; Neopterygii; Ictaluridae; Ictalurus.
                                                                                                                                                                                  NCBI_TaxID=7998;
                                                                                                                                                                                                                                                                                                                                               Oncoprotein
                                                                                                                                                                                                                                                                                                                                                                          01-MAR-2001
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                           Q9DFB9;
01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mindrinos M., Katagiri F., Yu G., Au "The A. thallana disease resistance containing a nucleotide-binding site Cell 78:1089-1099(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM .....
STRAIN=Col-0; TISSUE=Leaf;
STRAINE=95007758; PubMed=7923358;
MEDLINE=95007758; PubMed=792358;
MEDLINE=9500758; PubMed=79258;
MEDLINE=9500758; PubMed=79258; PubMed=79258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PFO
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9DFB9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; U12858; AAA50234.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidopsis thaliana (Mouse-ear cress).

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core ereurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1996 (TrEMBLrel. 01, Create 01-NOV-1996 (TrEMBLrel. 01, Last s 01-OCT-2003 (TrEMBLrel. 25, Last a Col-0 nucleosome assembly protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=3702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            238809;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q38809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR002164; NAP_family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO:0005634; C:nucleus; IEA.
GO:0003677; F:DNA binding; IEA.
GO:0006334; P:nucleosome assembly;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pro; IPR002164; NAP family. PF00956; NAP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PF00956; NAP;
NCE 372 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 9; Conserv
                                                                                                                                       FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EEDEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEEDEEDEED
                                                                                                                                                                                                                                                                                                                                               myc.
                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     382 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                            Bengten
                                                                                                                                                                                                             Ictalurus
                                                                                                                                       N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.2%; Stu-
100.0%; Pr
... 0;
                                                                                                                                                                                                                                                                   (Channel Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   44064 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                      Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42997 MW;
     TO T
                                                                                                                                                                                                                                                                                                                                                                     16,
16,
24,
                                                                                                            Wilson
EMBL/GenBank/DDBJ database
                                                                                                                                                                                                                                                           catfish).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence upun-
Last annotation update)
protein I-like protein (F
                                                                                                                                                                                                                                                                                                                                                               Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 9;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 9; Pred.
                                                                                                                                                                                                                                     Teleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
                                                                                                      M.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EA0CB83111C0F75E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ore 9; DB 1
red. No. 4.1
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8AA1C7E84C0BC4D2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                            Miller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IEA
                                                                                                                                                                                                                                   Ostariophysi;
                                                                                                                                                                                                                                                           Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   leucine-rich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .2;
                                                                                                                                                                                                                                                                                                                                                                                             update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA
                                                                                                                                                                                                                                                                                                                                                                     update)
                                                                                                      N.W.,
                           databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            encodes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 372;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                         Warr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tracheophyta;
  (HTHE)
                                                                                                                                                                                                                                     Siluriformes;
                                                                                                         Q
                                                                                                      Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
  FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
  S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
RESULT 15
Q86YR
ID Q86YR
AC Q86YR
DT 01-JU
DT 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
Search completed: July 22, 2004, 16:55:35 Job time: 46 secs
                                                                                                                                                                                                 Ş
                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSCRIPTION FACTORS.

R EMBL; AF28394; AAG14351.1; -.

R HSSP; P25912; 1HLO.

R GO; GO:0005634; C:nucleus; IEA.

R GO; GO:0003700; F:transcription factor activity; IEA.

R GO; GO:0003700; F:transcription factor activity; IEA.

Interpro; IPR001092; HLH basic.

R Interpro; IPR001092; HLH basic.

R Interpro; IPR003327; Myc-LZ.

R Pfam; PF000105; Myc-LZ; 1.

R Pfam; PF001056; Myc-LZ; 1.

R Pfam; PF01055; Myc-LZ; 1.

R Pfam; PF01055; Myc-LZ; 1.

R PFAM; PR00105; Myc-LZ; 1.

R PROSITE; PS50888; HLH; 1.

R PROSITE; PS50888; HLH—2; 1.

R PROSITE; PS50888; HLH—2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 9
                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q86YR3 PRELIMINARY; PRT; 417 AA.
Q86YR3;
Q1-JUN-2003 (TrEMBLrel. 24, Created)
O1-JUN-2003 (TrEMBLrel. 24, Last sequence update)
O1-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Adult retina hypothetical protein.
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.

Li F., Yao K.T.;

Li F., Yao K.T.;

Li F., Yao K.T.;

"Characterization and chromosomal assignment of a novel human gene similar to Mus musculus adult retina hypothetical protein cDNA."; submitted (NOV-2002) to the EMBL/GenBank/DDBJ databases.

EMBL; AN174896; AAO18732.1; -.

Hypothetical protein.

SEQUENCE 417 AA; 46579 MW; 9DBD37B07C14556B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                             Local Similarity 100.0%; es 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 205 EEDEEDEED 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              293 EEDEEDEED 301
                                                                                                                                           355
                                                                                                                                                                            293 EEDEEDEED 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 100.0%;
9; Conservative (
                                                                                                                                        EEDEEDEED 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.2%; Score 9; DB 13;
100.0%; Pred. No. 4.3;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                    2.2%; Score 9; DB 4
100.0%; Pred. No. 4.5
ive 0; Mismatches
                                                                                                                                                                                                                                                                                <u>,</u>
                                                                                                                                                                                                                                                                                                                DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 390;
                                                                                                                                                                                                                                                                                                                                                    Length 417;
                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                           0;
```

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect
                                                                                                                  Database
                                                                                                                                                                                                                                           Total number
                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                      Post-processing:
                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein -
                                                                                                                                                                                                    DB
DB
                                                                                                                                                                                                                                                                                                                                                         score:
                                                                                                                                                                                                 seq
                                                                                                                                                                                                                                           Of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein search, using sw model
 A_Geneseq_29Jan04:*
1: geneseqp1990s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003bs:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
                                                                                                                                                                                               length: 0
length: 2000000000
                                                                                                                                                                                                                                   hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                             BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                   1586107 segs,
                                                                                                                                                                                                                                                                                                                                                         US-09-831-804-3
2229
                                                                                                                                         Minimum Match 0%
Maximum Match 100%
Listing first 45 sm
                                                                                                                                                                                                                                                                                                                                                                                                                             July 22,
                                                                                                                                                                                                                                                                                                                                   MSESDETKSISSLISSSSSSS......PLVKKARMDLLPNETSVISR 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Copyright
geneseqp2004s:*
                                                                                                                                                                                                                                                                                                                                                                                         2004, 16:42:30; Search time 54 Seconds (without alignments) 2155.733 Million cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                   282547505 residues
                                                                                                                                           summaries
                                                                                                                                                                                                                                     1586107
                                                                                                                                                                                                                                                                                                                                                                                           updates/sec
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result		Query		1		
No.	Score	Match	Length	DB	1	Description
1	2229	100.0	412	ω	AAY93316	4 915
N	2225	99.8	412	5	73	Abp73656 Candida a
w	445	20.0	564	σ	ABJ25655	Depercia
4	445	20.0	564	σ	ABJ26255	Abi26255 Asperdill
ഗ	416.5	18.7	1212	4	ABG00399	NOVE
ı on	403	18.1	1230	4	AAU30831	
) /	400	17.9		4	AAM38689	Human
οα	865	17.9	563	σ	ABU96690	Human
, ע	395.5	17.7		ω	AAY93317	A huma
1 C	0 0	11.	409	4.	AAG75181	
1 1	30.0	17.7	423	N	AAR91305	
1 2	ט ט ז	17.	622	4.	AAM78947	
	395	17.7	631	4,	AAM79931	Human
4 1	1 (J.	17.7	632	4	ABG18386	Novel
, ,) (17.7	719	4	ABG16953	Novel
1 6	30.5	٠	1472	4	AAU31578	Novel
3 L	3 3 9 3	17.6	517	4	ABG03375	Nove1
. 18	392.5		1050	4	ABG09685	Novel
1	392.5		1050	7	ADC32995	Human
220	30392		555	σ	ADA54763	Human
) <u> </u>	440.5	17.5	878	4	AAU29528	Novel
) N	190.5	٠	1520	4,	ABG27130	Novel
23	390	17.5	540	7	ADB65594	Human
24	390	17.5	576	σ	ADA54797	7 Human
2,5	390	17.5	620	σ	ABU96725	Human

00000000000000000000000000000000000000	X & X	Y P P I	저무무	X P.	X P	X X	ΧŖ	X B :	X PN	XXTTTTT	X S	X	XX	Z Z	ž Ř.	RES FD		
The press designate involved polynucle useful as protectivantibodic	lai	. e	PI;	Bordon	(HMRI	0	09-NOV	18-MAY	WO20	Key Misc Misc	Candi	Trans	-	4.	AAY9331	SULT 1 193316 AAY93		22226666666666666666666666666666666666
8 6 5 6 H	.m 12; Pa	nucleic in scre	2000-37 DB; AAA1	on-Palli	I) HOECHST	-NOV-1998;	OV-1999;	AY-2000.	WO200028037-	-diff	da	cript omal	ranscript	SEP-2000	3316;	316 st		388.5 387.5 385.5 385.5 385.3 385.3 385.3 385.3 379 379 377
t sequence CATFIIIA. In initiati tide is us antimycoti against f	Page 35-36	c acid encorreening for	6549/32 5398.	er F,	HST MARION	98FR	9		A1.	Erence 193 /note= erence 339 /note=	albicans.	ion factor, RNA 58 gene	tion factor	(first		andard;		17.4 17.4 17.3 17.3 17.3 17.3 17.3 17.3 17.3 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
The png traed to cagen ungal as the	; 45I	oding r ant	•	Camier		-00014147	9WO-FR002739			cation/Quali 3 ote= "Ser en 9 ote= "Ser en		, C		entry)		protein;		501 872 777 770 770 803 615 817 817 817 817 817 817 817 817 817 817
resents polypep ranscrip o screen ents, to l infect; he polype		g Candi		ູດ	ROUSSEL.	47.	39.)ual e e		ATFIII fungal	sign	_				457465446665
ndid is of its se a and des	nch.	da albicans t ic agents and		Sentenac A;	F.					lifiers encoded by CTG" encoded by CTG"		A; DNA-binding infection.	designated CATFIIIA.			412 AA.	ALIGNMENTS	ABB71369 ABB79872 ADC37535 ABG16954 ABG16954 ABG11782 AAG14920 ABG10991 ABG270106 AAG27047 ABG01956 AAAB9447 ABG01956 AAAB94475 AAB94428 AAB958423 AAB9444407 ABB7444407 ABB75423 ADC31847
bicans tra A-binding ribosomal cific inhi tibody res aise antib polynucleo		scrij r im										protein						
a albicans transcription factor, a DNA-binding protein, which is the ribosomal RNA 55 gene. The specific inhibitors, potentially in antibody response that is to raise antibodies. Such and polynucleotides are used in		ranscription factor, useful for immunization.										1;						Abb71369 Drosophil Abb79872 TRAF6-inh Adc37535 Human nuc Abg16954 Novel hum Abul1782 Human MDD Aae14680 Human tra Abg10091 Novel hum Abg14920 Novel hum Abg14920 Novel hum Abg20106 Novel hum Abg20106 Novel hum Abg20106 Novel hum Abg30956 Novel hum Aae37047 Human nuc Abg01956 Novel human pol Aab94862 Human pol Aab94868 Human pro Abm40916 Human pro Abm41469 Human DIT Adc31307 Human DIT Adc31307 Human DIT Abp55423 Human zin Adc31847 Human nov

SSXGG

밁 Š В Š 밁 Ş

δ 뫄 Š

```
RESULT 2
ABB73650
ID ABB7
XX ABB7
XX ABB7
XX ABB7
XX YX Func
Canc
XX Func
XX F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 412; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          compositions for diagnosing detecting polymorphisms and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fungus; yeast; tetracyclin; promoter; GRACE strain; biosynthesis; signal transduction; DNA replication; cell division; growth; proliferation; Candida albicans; fungicide; antifungal.
Constructing strains for identifying gene products as effective for therapeutic intervention, by inactivating in the strain one
                                                                                                                                                                                                                                                                                           29-DEC-2000; 2000US-0259128P.
20-FEB-2001; 2001US-00792024.
22-AUG-2001; 2001US-0314050P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200253728-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Candida albicans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Candida albicans essential protein SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABP73656 standard; protein;
                                                                                             N-PSDB; ABZ32206
                                                                                                                                                                                  Roemer T,
                                                                                                                                                                                                                                                                                                                                                                                                              26-DEC-2001; 2001WO-US049486
                                                                                                                                                                                                                                        (ELIT-) ELITRA PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                        2002-566694/60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSESDETKSISSLISSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QTWSVLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QTWSVLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AFYKHQSLRHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AFYKHOSLRHHILSVHEKTLTCKOCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MSESDETKSISSIISSSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DLRRHLKWHDDNLQRIESFLNSIEKEETPEGEPLVKKARMDLLPNETSVISR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KNELVEHYNIFHDGNIFDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DLRRHLKWHDDNLQRIESFLNSIEKEETPEGEPLVKKARMDLLPNETSVISR 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                               Jiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                  Boone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and treating fungal infections, e.g. by mutations
                                                                                                                                                                                  Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 2229; DB 3;
Pred. No. le-167;
'; Mismatches 0;
                                                                                                                                                                                     Bussey
                                                                                                                                                                                           Ohlsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7493.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            412
                  targets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
```

```
Claim 44;
                                                                                                        gene and placing other allele of the gene under conditional
                                                                                                 SEQ ID NO 7493; 167pp + Sequence Listing;
                                                                                                   English
                                                                                                           expression.
```

ce recombination, of a promoter replacement fragment with a heterologous compounder, so that expression of the second allele is regulated by the promoter. (MI) is useful for constructing a strain of diploid fungal cells in which both alleles modified are useful for identifying a gene that cells having both alleles modified are useful for identifying a gene that contributes to the virulence and/or pathogenicity of a fungus, a gene that contributes to the resistance of a diploid fungus, a gene that contributes to the resistance of a diploid fungus to an antifungal agent that inhibits the growth of a diploid fungus of a gene, and for identifying a therapeutic agent for treatment of a mammalian contributes to a gene product, preferably enzymatic activity, carbon compound catabolism, biosynthetic, transporter, transcriptional, compound catabolism, biosynthetic, transporter, transcriptional, contributed the growth of product translation of compound catabolism, biosynthetic, transporter, transcriptional, contributed the growth of products, preferably enzymatic activity, carbon cativity. The method is useful for identifying a compound having the cativity to inhibit growth or proliferation of C. albicans cells and for treating infection by C. albicans. The present sequence is that of an cessential Candida albicans protein used in the method of the invention. Constitution by the sequence data for this patent is not represented in the printed specification but is based on sequence information supplied to Derwent by the European Patent Office The invention relates to constructing (MI) a strain of diploid cells in which both alleles of a gene are modified, comprising one allele by insertion or replacement by a cassette having an expressible selectable marker and modifying other allele by modifying fungal

Sequence 412 AA;

```
8
                                                                                                                                                                                                       멍
                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                    S
                      á
                                                 밁
                                                                        Š
                                                                                                  망
                                                                                                                         Š
                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                               Matches 411;
                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                    301
                                                                           301
                                                                                                     241
                                                                                                                             241
                                                                                                                                                        181
                                                                                                                                                                             181
                                                                                                                                                                                                        121
                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                       Ы
                                                                                                                                                                                                                                                                                                             μ
                                                                                                                                                                                                                                                                                                                           WSBSDETKSISSLISSSSSSR¤KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVD
                                                                                                                                                                                                                                                                          AFYKHQSLRHHIILSVHEKTIITCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNF
                                                                                                                                                                                                                                                                                                            WSESDETKSISSLISSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVE
                                                                                                                                                      QTWSVLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAK
                                                                                                                                                                       QTWSVLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAK
                                                                                                                                                                                                      AFYKHQSLRHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNF
                                                                                                                                                                                                                                                          DCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQE
                  DLRRHLKWHDDNLQRIESFLNSIEKEETPEGEPLVKKARMDLLPNETSVISR 412
                                                                  KNELVEHYNIFHDGNIPDDLLKETEVKKLENLLDOGSKLNNLHELETEKLKVEEDEBDEE
                                                                                                                         KNELVEHYNI FHDGNI PDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEE
DLRRHLKWHDDNLQRIESFLNSIEKEETPEGEPLVKKARMDLLPNETSVISR
                                                   DSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREY
                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                             99.8%;
                                                                                                                                                                                                                                                                                                                                                                 Score 2225; DB 5;
Pred. No. 2.1e-167;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                            DB 5;
                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                   60
                                                                                   360
                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                 120
                                                                                                                                                             240
                                                                                                                                                                                                               180
                                                                                                           300
```

RESULT 3
ABJ25655
ID ABJ2
XX
AC ABJ2
XX
AC ABJ2
XX
AC ABJ2
XX
AC ABJ2
XX

ABJ25655

standard;

protein;

564

A

16-APR-2003

(first entry)

Aspergillus fumigatus

essential gene

protein

#313.

t,

```
밁
                                                                     Ş
                                                                                                        뮍
        Ş
                                                                                                                                    Š
                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 125
                                                                                                                                                                                                                                                                  therapeutic use, as markers for host tissues in which the pathogenic corganisms invade or reside, for comparing with the DNA sequence of A. Comparing with the DNA sequence of A. Comparing with the DNA sequence of A. Comparing with the pathogenic comparing with DNA sequence of A. Comparing with DNA sequence of A. Comparing with DNA sequences of other related or distant pathogenic organisms to identify comparing with DNA comparing with DNA acceptance of a nucleic acid array for selecting and making oligomers for attachment to a nucleic acid array for examination of expression patterns, for raising anti-protein antibodies, as an comparing with which binding occurs or to identify inhibitors of the binding interaction. The polypeptides may be used to raise antibodies or to elicit immune response, as a reagent in assays designed to quantitatively host tissues in which pathogenic organism invade or reside, and to isolate correlative receptors or ligands in the case or virulence factors. This sequence represents a protein of one of the essential genes of Aspergillus fumigatus of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           essential genes of Aspergillus fumigatus. The isolated nucleic acids of the invention are used to treat or prevent infections by a pathogenic organism such as A. fumigatus, to treat a non-infectious disease in a subject (e.g. cancer), to prevent or contain contamination of an object by A. fumigatus, or to prevent or inhibit formation on a surface of a biofilm comprising A. fumigatus. The polynucleotides are useful for expressing recombinant protein for characterisation, screening or corganisms invade or recian for host tissues in which the corganisms invade or recian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27-APR-2001;
05-JUN-2001;
09-JUL-2001;
31-AUG-2001;
                                                                                                                                                                                                                                         Sequence 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page; 175pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New purified or isolated nucleic acids of essential genes of Aspentundentus, useful for treating or preventing infections by A. fumion for treating a non-infectious disease in a subject e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ELIT-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-APR-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200286090-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Aspergillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fungicide;
                                                                                                                                                                                        Local Similarity
                                                                       71
                                                                                                        71
                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2003-093124/08
     HQSLRHHILSVH--EKTLTC-
                               HLNHHİKSAHTGVRDYVCDRPGCGKSFVTGSRLRRHLAAHDGRDKYRCTEYPPCNETFRK
                                                                                                                        ISSSSSRP---KKYICTYEGCDKAYNRESLLEQHLRTHSNDRPYKCTVDDCDKAFERKS
                                                              HLETHIVS-HSEKKPFHCS--VCGKGVNSRQHLKRHEITH--TKSFKCT-FENCQEAFYK
                                                                                              İSTTSAKYPSELKTHRCPFDGCTKAFNRPARLQEHLRSHNNERIFKCTFEECDKTFLRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ELITRA PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       de; cytostatic;
contamination;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tishkoff D,
                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001US-0285697P

2001US-0287066P

2001US-0295890P

2001US-0303899P

2001US-0316362P
                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fumigatus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002WO-US013142.
                                                                                                                                                                                       20.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        essential biofilm; a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zamudio
                                                                                                                                                                       62;
                                                                                                                                                                                   Score 445; DB 6;
Pred. No. 1.8e-26;
                                                                                                                                                                                                     Score
                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene; Aspergillus fumigatus; infection;
antibody; immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eroshkin
-KQCNKVFTRPSKLAQHKLKHHGGSPAYQCDH-
                                                                                                                                                                     164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AM,
                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뜐
                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lemieux
                                                                                                                                                                  62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of Aspergillus A. fumigatus,
                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              XS
                                                                                               130
                                                                                                                                  70
                                                                                                                                                                  21;
```

```
RESULT 4
ABJ26255
ID ABJ26255
XX ABJ2
XX ABJ2
XX Pung
XX Fung
XX Pung
XX Pung
XX Aspe
XX Aspe
XX Aspe
XX Aspe
XX Aspe
XX Aspe
XX Aspe
XX Aspe
XX Aspe
XX Aspe
XX I J1-1
PR 09-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
         The invention relates to novel purified or isolated nucleic acids of essential genes of Aspergillus fumigatus. The isolated nucleic acids of the invention are used to treat or prevent infections by a pathogenic organism such as A. fumigatus, to treat a non-infectious disease in a subject (e.g. cancer), to prevent or contain contamination of an object by A. fumigatus, or to prevent or inhibit formation on a surface of a biofilm comprising A. fumigatus. The polynucleotides are useful for expressing recombinant protein for characterisation, screening or therapeutic use, as markers for host tissues in which the pathogenic organisms invade or reside, for comparing with the DNA sequence of A. fumigatus to identify duplicated genes or paralogues having the same or similar biochemical activity and/or function, for comparing with DNA sequences of other related or distant pathogenic comparings to identify
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New purified or isolated nucleic acids of essential genes of Aspergillus fumigatus, useful for treating or preventing infections by A. fumigatus, or for treating a non-infectious disease in a subject e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-APR-2001; 2001US-0285697P.
27-APR-2001; 2001US-0287066P.
05-UIN-2001; 2001US-0295890P.
09-UUL-2001; 2001US-0303899P.
31-AUG-2001; 2001US-0316362P.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page; 175pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-APR-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200286090-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aspergillus fumigatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fungicide; cytostatic; essential gene; Aspergillus fumigatus; infection;
cancer; contamination; biofilm; antibody; immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aspergillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fungicide; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABJ26255 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ELIT-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2003-093124/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ELITRA PHARM
orthologous essential or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHL--KWHDDNLQRIESFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SQHABGAEATFPTYALLQAHIRSVHPP-QCPNCALTCATSRELRRHLEVAHGDVSLEERK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GEGYAEE----TGRHIACLVESCPHRFHRDYDLWVHMSGKHHFSEEETRDLFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IFPCTVPGCD-RSFTKKGNLTVHIRTVHQGEKRFVCGETDLSSSKKVSGWNN--DNGCGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IWTCDY--CDVGKFAKKNELVEHYNIFHDGNI----PDDLLKETEVKKLENLLDQ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----PGCFKNFQTWSVLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHM-LSHDDSTM--IK 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tishkoff D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RYGSKLALEEHIRTAHLGYQNAKAERRORLGITRDRQHSTATSPGVSA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --GSKLNNLHELETEKLKVEEDEEDEEDSL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fumigatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2002WO-US013142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             essential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zamudio
                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene protein #913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eroshkin AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEKRSDVRSDSMSAQRSIKSFTASLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lemieux SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --LAALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              275
```

```
SSSSSSSSSSSXX
RABSULT 5
ARAGOO292
ID ABGO
XX
AC ABGO
XX
DT 13-F
DT 13-F
DX
Huma
KW Food
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
Home
XX
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              making oligomers for attachment to a nucleic acid array for examination of expression patterns, for raising anti-protein antibodies, as an antigen to raise anti-NNA antibodies or to elicit another immune response, and for identifying polynucleotides encoding the other protein with which binding occurs or to identify inhibitors of the binding interaction. The polypeptides may be used to raise antibodies or to elicit immune response, as a reagent in assays designed to quantitatively determine levels of the protein in biological fluids, as a marker for host tissues in which pathogenic organism invade or reside, and to isolate correlative receptors or ligands in the case or virulence factors. This sequence represents a protein of one of the essential genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 564
                                                                       31-MAR-2000; 2000US-00540217.
23-AUG-2000; 2000US-00649167.
                                                                                                                                                                            30-MAR-2001; 2001WO-US008631
                                                                                                                                                                                                                                                                                                                     WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; chromosome mapping; gene mapping; gene therapy; food supplement; medical imaging; diagnostic; genetic of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel human diagnostic protein #390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABG00399 standard;
                                                                                                                                                                                                                                                11-OCT-2001.
   (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aspergillus fumigatus of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HQSLRHHILSVH--EKTLTC-----KQCNKVFTRPSKLAQHKLKHHGGSPAYQCDH- 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HLNHHIKSAHTGVRDYVCDRPGCGKSFVTGSRLRRHLAAHDGRDKYRCTEYPPCNETFRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ISTTSAKYPSELKTHRCPFDGCTKAFNRPARLQEHLRSHNNERIFKCTFEECDKTFLRAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ISSSSSRP---KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----PGCFKNFQTWSVLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHM-LSHDDSTM--IK 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSTLQKHIMTAHLKQKPFQCPHTDPSTGQKCTMAFDTAGHLRAHESRIH-TEKRFSCTEC 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HLETHIVS-HSEKKPFHCS--VCGKGVNSRQHLKRHEITH--TKSFKCT-FENCQEAFYK 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IWTCDY---CDVGKFAKKNELVEHYNIFHDGNI-----PDDLLKETEVKKLENLLDQ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SQHAEGAEATFPTYALLQAHIRSVHPP-QCPNCALTCATSRELRRHLEVAHGDVSLEERK 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RYGSKLALEEHIRTAHLGYQNAKAERRQRLGITRDRQHSTATSPGVSA-----LAALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHL--KWHDDNLQRIESFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      --GSKLNNLHELETEKLKVEEDEEDEEDSL----DEKRSDVRSDSMSAQRSIKSFTASLE 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IFPCTVPGCD-RSFTKKGNLTVHIRTVHQGEKRFVCGETDLSSSKKVSGWNN--DNGCGK 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGRHIACLVESCPHRFHRDYDLWVHMSGKHHFSEEETRDLFL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 445; DB 6;
Pred. No. 1.8e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          164; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                418
```

Matches Query Match

116;

Conservative

45;

Local Similarity

18.7%;

Score 416.5; DB 4 Pred. No. 9.1e-24; Mismatches 148;

DB 4;

Length 1212; Indels

47;

Gaps

Sequence 1212

ΑA;

Ś 뮍 8

```
cc sequences (I) is useful as hybridisation probes, polymerase Chain

CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,

CC and in recombinant production of (II). The polymucleotides are also used

CC in diagnostics as expressed sequence tags for identifying expressed

CC genes. (I) is useful in gene therapy techniques to restore normal

CC activity of (II) or to treat disease states involving (II). (II) is

CC useful for generating antibodies against it, detecting or quantitating a

CC polypeptide in tissue, as molecular weight markers and as a food

CC supplement. (II) and its binding partners are useful in medical imaging

CC of sites expressing (II). (I) and (II) are useful for treating disorders

CC involving abservant protein expression or biological activity. The

CC polypeptide and polymucleotide sequences have applications in

CC and to produce other types of data and products dependent on DNA and

CC amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic

CC amino acid sequences of the invention. Note: The sequence data for this

CC electronic format directly from MIPO at

CC electronic format directly from MIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to isolated polynucleotide sequences. (I) is useful as hybridisation probes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             biodiversity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drmanac RT,
                                           ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20; SEQ ID NO 30758; 103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAS64586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (I) and polypeptide (II)
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                   뫄
                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                           Š
                                                                                                                                                                                   멍
                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                    В
                                                AAU30831
                                                                RESULT 6
AAU30831;
                                  AAU30831
                                                                                                                                                                                     1086
                                                                                                                                                                                                                                                     1031
                                                                                                                                                                                                                                                                                   197
                                                                                                                                                                                                                    254
                                                                                                                                                                                                                                                                                                                        975
                                                                                                                                                                                                                                                                                                                                                                                      917
                                                                                                                                                                                                                                                                                                                                                     137
                                                                                                                                                                                                                                                                                                                                                                                                                        90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSH
                                                                                                                                                                                                                                                                                                                                                                                     TGEKPYKCEECGKAFRKSSTLTEHKIIHTGEKPYKC--EECGKAFSQSSTLTRHTRMHTG
                                                                                                                                                                                                                                                                                                                                                                                                                    SEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQBAFYKHQSL-RHHILSVH
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TREKTYKĆ--EECGKAFSQPSHLTTHKRMHTGEKPYKĆ--EECGKAFSQSSTLTTHKIIH
                                                                                                                                                                                                                                                    EKPYKCEECGKAFSQSSTLTRHKRLH---TGEKPYKCGEC--GKAFKESSALTKHKIIHT
                                                                                                                                                                                                                                                                                   ---LKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHD
                                                                                                                                                                                                                                                                                                                      EKPYKCEECGKAFNRSSKLTTHKIIHTGEKP-YKCEE--CGKAFISSSTLNGH-KRIHTR
                                                                                                                                                                                                                                                                                                                                                    EKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFHIKQSHPK 196
                                  standard;
                                                                                                                   PYKYKECGKSFNRSSTFTK--HKVIHTGVKLYKC--EECGKSFFWSSALTRHKKIH
                                                                                                                                                  SMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                    GNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEEDSLDEKRSDVRSD 313
                                                                                                                                                                                     -KPYKCEKCGKAFNOSSILTNHKKIHTITPKIH--
                                 protein; 1230
                                                                                                                                                                                                                                                            1085
                                                                                                                                                                                                                                                                                                                             1030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                916
                                                                                                                                                                                                                                                                                            253
                                                                                                                                                                                                                                                                                                                                                                                             974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79
```

18-DEC-2001

(first

Ś

RSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLKWH

369

```
C polypeptides and antibodies to the polypeptides are useful for ceterativing the presence of or predisposition to a disease associated with altered levels of polypeptide. The polypeptides are also useful for cidentifying agents (agonists and antagonists) that bind to them. Cells crown set in treatment of a pathology related to aberrant expression or comprision or comparison of the polypeptide. Vectors comprising the polypeptide and cells genetically engineered to express them are also useful for producing the proteins. The proteins comprising the conclusic acids encoding the polypeptides and cells genetically engineered to express them are also useful for producing the proteins. The proteins compression or conclusive encoding the polypeptides and cells genetically engineered conclusions are useful in genetic vaccination, testing and therapy, and can be used conclusive encoding to regulate haematopoiesis; and in bone, cartilage, tendon condition; as anti-inflammatory agents; and in treatment of leukaemias.

CC and/or nerve tissue growth or regeneration; immune suppression and/or stimulation; as anti-inflammatory agents; and in treatment of leukaemias.
                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 118
                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      vaccination, testing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-APR-2000;
26-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200179449-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel human
      1114
                                                                     1061
                                                                                                                                      1005
                                     251
                                                                                                     197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      invention relates
                                                                                                                                                                                                                                                                      891
                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                       118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cell proliferation;
                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        suppression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acids encoding a range of human polypeptides, useful in genetic
                         FHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEEDSLDEKRSDV 310
                                                                                         LKCPKCGKGCVGK-----KGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNI
                                                                                                                                                                                                                                                                                SRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRDYKCTVDDCDKAFFRKSHLETHIVSH
                                                                                                                                 EKPYKCEECGKAFNRSSKLTTHKI IHTGEKP
                                                                                                                                                           EKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCPKNFQTWSVLQFHIKQSHPK
                                                                                                                                                                                          TGEKPYKCEBCGKAFRKSSTLTEHKIIHTGEKPYKC--EECGKAFSQSSTLTRHTRMHTG
                                                                                                                                                                                                                           SEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL-RHHILSVH
                                                                                                                                                                                                                                                          TREKPYKC--EECGKAFSQPSHLTTHKRMHTGEKPYKC--EECGKAFSQSSTLTTHKIIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ccination; gene therapy; nutritional supplement;
proliferation; haematopoiesis; nerve tissue regeneration;
ppression; immune stimulation; anti-inflammatory; leukaemia.
                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-00552929.
2001US-00770160.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001WO-US008656
                                                                                                                                                                                                                                                                                                                                                                                                    AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                   represent the amino of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drmanac
KPYKCEKCCKAFNQSSILTNHKKIHTITPKIH
                                                               -GKAFSQSFNTLTGHKRLH-
                                                                                                                                                                                                                                                                                                                                                    18.1%;
32.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to novel human secreted polypeptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein #1322.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RT;
                                                                                                                                                                                                                                                                                                                                  45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English.
                                                                                                                                                                                                                                                                                                                                                    Pred.
                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                  403;
No. 1
                                                                                                                                                                                                                                                                                                                                                DB 4;
.1e-22;
                                                               -TGEKPYKCGEC
                                                                                                                              CGKAFISSSTLNGH-KRIHTR
                                                                                                                                                                                                                                                                                                                                                              Length 1230;
                                                                                                                                                                                                                                                                                                                                 Indels
                                                            GKAFKESSALTKHKI
                                                                                                                                                                                                                                                                                                                             52;
                                                                                                                                                             196
                                                            1113
                                                                                                                            1060
                                                                                             250
                                                                                                                                                                                             1004
                                                                                                                                                                                                                            136
                                                                                                                                                                                                                                                             946
```

밁 γ

밁 Ϋ́

Query Match

17.9%;

Score

400;

DВ

4.

Length

Ş

В Ş B Ś

밁

```
The invention relates to human nucleic acids (AAI57798-AAI61369) and the cencoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous. System, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as C localised neuropathies and central nervous system diseases, such as C latheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the cutilisation of the activity. The activity system suppression, activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and contents. Note: The sequence data for this patent did not form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                    23-DEC-1999;
21-JAN-2000;
25-APR-2000;
20-JUN-2000;
19-JUL-2000;
03-AUG-2000;
14-SEP-2000;
19-OCT-2000;
Sequence
                                                                                                                                                                                                                                                         Novel nucleic acids and polypeptides, useful as central nervous system injuries.
                                                                                                                                                                                                                                                                                                                                              Zhou
                                                                                                                                                                                                                                                                                                       N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance: peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; chemotrophic lateral sclerosis; Shy-Drager Syndrome; chemotractic; chemotkinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                         29-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200153312-A1
                                                                                                                                                                                                                                                                                                                                                                                                (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAM38689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAM38689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               leukaemia.
                          S disorders.
of the prin
                                                                                                                                                                                                                                                                                                                                           L, 'r
                                                                                                                                                                                                                                                                                                                 2001-442253/47.
                                                                                                                                                                                                                                                                                                                                                                                               HYSEQ INC.
 809
                                                                                                                                                                                                                                                                                                                                                      Wang
                                                                                                                                                                                                                                                                                                                                           Goodrich
                                                                                                                                                                                                                                                                                                                                                      Liu C,
Wang Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REKPYKYKECGKSFNRSSTFTK--HKVIHTGVKLYKC--EECGKSFFWSSALTRHKKIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard; protein; 809 AA
                          printed
                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-00488725.
2000US-00598042.
2000US-00598042.
2000US-00620312.
2000US-00653450.
2000US-00662191.
                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-00693036.
2000US-00727344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000WO-US034263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                ID NO 1834; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99US-00471275
                                                                                                                                                                                                                                                                                                                                                      Asundi V
Wehrman
                                                                                                                                                                                                                                                                                                                                           ,
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 1834.
                       te: The sequence specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                           Drmanac
                                                                                                                                                                                                                                                                                                                                                  , , , v
                                                                                                                                                                                                                                                                                                                                        Chen R,
Xu C,
C RT;
                                                                                                                                                                                                                                                                                                                                                      Ma
Xue
                                                                                                                                                                                                                                                                                                                                                    Α,
                                                                                                                                                                                                                                                                                                                                                   Qian 1
                                                                                                                                                                                                                                                                     for treating disorders
                                                                                                                                                                                                                                                                                                                                                   AX,
                                                                                                                                                                                                                                                                                                                                                  Ren F,
Zhang
                                                                                                                                                                                                                                                                                                                                                   ٦
                                                                                                                                                                                                                                                                                                                                                   Wang D;
                                                                                                                                                                                                                                                                     such
                                                                                                                                                                                                                                                                                                                                                               Ď,
                                                                                                                                                                                                                                                                                                                                                  QA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1206
```

Best Local

Similarity

31.9%;

Pred. No.

```
RRSULT 8
ABU96
ABU96
XX ABU96
XX ABU99
XX ABU99
XX ABU99
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Huma
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
XX Hom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              よ
                                                                                                                               07-SEP-2001; 2001US-0317792P.
07-SEP-2001; 2001US-0317912P.
14-SEP-2001; 2001US-032270P.
21-SEP-2001; 2001US-0324040P.
28-SEP-2001; 2001US-0326732P.
19-OCT-2001; 2001US-0346716P.
25-JAN-2002; 2002US-0357749P.
22-FEB-2002; 2002US-0359498P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; nucleic acid-associated protein; cytostatic; antiarteriosclerotic; antionvulsant; nootropic; neuroprotective; cerebroprotective; anti-HIV; antiallergic; antiinflammatory; thyromimetic; gene therapy; cell proliferative disorder; cancer; atherosclerosis; neurological disorder; epilepsy; Huntington's disease; stroke; neurological disorder; epilepsy; Huntington's disease;
  Tang YT,
Becha SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human nucleic acid-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABU96690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABU96690
                                                                                                                                                                                                                                                                                                                                                                                05-SEP-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                     20-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2003023003-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein-protein interaction; drug-target interaction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immune disorder; inflammatory disorder; AIDS; allergy;
developmental disorder; Hypothyroidism; Cushing's syndrome; infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              expression profile.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COEAFYKHOSI-RHHILSVHEKTLTCKOCNKVFTRESKLAQHKLKHHGGSPAYQCDHPGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DDCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GKAFNHFSILTKHKRIHTGEKPYKCEECGKAFTQSSNLTTHKKIH---TGEKFYKCEEC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FKNFQTWSVLQFH--IKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EECGKAFNWPSTLTKHNRIHTGEKPYKCEVCGKAFNQFSNLTTHKRIHTAEKPYKC--EE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TECGEAFSRSSNLTKHKKIHTEKKPYKC--EECGKAFKWSSKLTEHKLTHTGEKPYKC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SESDETKSISSLISSSS--SRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTV
                                                                                      INCYTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ECGKAFKWSSTLTKHKIIHTGEKPYKCEECGKAF--KLSSTLSTHKIIHTGEKPYKCEK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E-DEEDEEDSLDEKRSDVRSDS--MSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VGK-FAKKNELVEHYNI FHDGNI PDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGKAFSRSSNLTKHKKIHIEKKPYKCEECGKAFKWSSKLTEHKITHTGEKP-YKCEE--C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -CGKAFNRPSNLIEHKKIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -GKAFTQSSNLTTHKKI-HTGGKP---YKCEECGKAFNQFSTLTKHKIIH-TEEKPYKCE
  Jackson JL,
Richardson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                                                                                                                                                                                                                                                                                                                                                      2002WO-US028540.
                                                                                      GENOMICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry
     Griffin
TW, Lee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein (NAAP) #19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
        JΑ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ä
        Elliott
Sprague
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.1e-22;
ches 171;
           WW.
SV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
        Forsythe
Emerling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34;
             BM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 234
```

```
HERREXERREFERXEXOSOSOSOSOSOSOSOSOSOSOSOSOS
                                                                                                                                                                                             Thangavelu K, War.
Hafalia AJA, Sanjanwal
Hafalia ME, Chawla NK,
Thanga MG,
Yangar
                                                                                                                                                                          WPI; 2003-313243/30.
N-PSDB; ACA98938.
                                                                                                                                                                                             Burford N,
                                                                                                                                                                                             Ramkumar J;
                                                                                                                                                                                                             Sanjanwala B,
                                                                                                                                                                                                                      Warren BA,
                                                                                                                                                                                              a NK,
                                                                                                                                                                                                   Nguyen DB,
han FA, Ga
                                                                                                                                                                                                                      Tran UK,
                                                                                                                                                                                                                Marquis
                                                                                                                                                                                                   UK, Yue H, Xu Y, Yue H, Li J
rquis JP, Gorvad AE, Lee SY, Is
DB, Swarnakar A, Zebarjadian Y,
Gandhi AR, Yang J, Kable AE;
                                                                                                                                                                                                                        Li
                                                                                                                                                                                                                  Ison
                                                                                                                                                                                                            Shah P;
                                                                                                                                                                                                                  CH;
```

New human nucleic acid associated proteins (NAAP), useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant NAAP expression e.g. cancer, AIDS, atherosclerosis, enilensy, or or

Claim 1; Page 255-257; 345pp; English.

The invention describes a novel human isolated nucleic acid-associated CC polypeptide (NAAP). The polypeptides and polynucleotides are useful in CC diagnosing, treating and preventing diseases or conditions associated CC with the decreased expression or overexpression of NAAP, such as cell CC proliferative (e.g. cancer, atherosclerosis), neurological (e.g. epilepsy, Huntington's disease, stroke), immune/inflammatory (e.g. AIDS, CC allergies) and developmental (e.g. Hypothyroidism, Cushing's syndrome) CC disorders, or infections. These are also useful in assessing the effects of exogenous compounds on the expression of nucleic acid and amino acid compounds for effectiveness as agonist or antagonist of the polypeptides, CC or in altering the expression of the target polynucleotide and compounds for effectiveness as agonist or antagonist of the polypeptides, CC that specifically bind to or modulate the activity of the polypeptide. The microarray is useful in monitoring or measuring protein-protein contractions, drug-target interactions, and gene expression profiles. This is the amino acid sequence of a novel human nucleic acid-associated contractions.

Query Match Best Local S Matches 121 Sequence 121; Similarity 563 AA; Conservative 17.9%; 48; Score 398; DB 6; Pred. No. 9.3e-23; Mismatches 167; Length 563; Indels 64; Gaps 18

```
310
                                                                                                                                                                                                                                                                                                                                            137
                                                                                                                                                                                                                                                                                                                                                                                 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                           196
                                                                         468
                                                                                                               315
                                                                                                                                                   422
                                                                                                                                                                                                                            367
                                                                                                                                                                                                                                                                195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                             TGKKPYKCEECGKAFNQSANLTTHKRIHTGEKPYKC--EECGRAFSQSSTLTAHKIIHAG
                                                                                                                                                                                                                                                                                                                                                                                                                 SEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL-RHHJLSVH
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŚGEKPYKĊ--KEĊGKAYNETŚNISTHKKIHTGKKPYKĊ--EECGKAFNKIŚHITTHKIIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSH
                                                                                                                                                                                      NIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEEDSLDEKRSDVRSDS
                                                                                                                                                                                                                                                            PKTKCBKCGKGCACKKGTSSHWTSHDDSIMIKIMICDACDACKEVKKNETAEHANIEHDG
                                                                                                             MSAQRSI----
                                                                                                                                                                                                                            KPYKCEECGKAFKOSSTLTTHKRIHAGE---KFYKCEVCSKA-FSRFSHLTTHKRI-HTG
                                                                                                                                                                                                                                                                                                      EKPYKCEECGKAFSQSSTLTTHKI-IHTGEKFYKCEE--CGKAFSQLSHLTTHKRIHSGE
                                                                                                                                                                                                                                                                                                                          EKTLTCKQCNKVFTRPSKLAGHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IKQSH
LNRHKMIHTGEKLYKPESCNNACDNIAKISKYKRNCAGEK 563
                                                                         LSKHKVIHTGEKPYKYEECGKAFNQS
                                                                                                                                                   EKP---YKCEECGKAFNLSSQLTTHKITHTGE-KPYKCEEC-
                                                                                                                 KSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYD
                                     DNLQRIESFLNSIEKEE
                                                                               -SHLTTHKMIHTGEKPYKC-
                                                                                 -EECGKAFNNSSI
                                                                                                                                                         -GKAFNQSST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     251
                                                                                                                                                                                                                                                                                                                366
                                                                                                                                                                                                                                                                                                                                                      194
                                                                                                                                                                                                                                                                                                                                                                                           309
                                                                                                                         361
                                                                                                                                                               467
                                                                                                                                                                                                  314
                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                            254
```

Ş 뮹 ΝŽ 밁 Ş 멍 δõ

RESULT 9
AAY93317
ID AAY9
XX

AAY93317

standard;

protein;

ΑA

밁 Ş 밁 Ş 밁

```
밁
                     Ş
                                                    멍
                                                                         Ş
                                                                                                       В
                                                                                                                             2
                                                                                                                                                              Дb
                                                                                                                                                                                   Ş
                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 99
                                                                                                                                                                                                                                                                                                                                                                                              The present sequence represents a human transcription factor designated htfIIA. The polypeptide is probably a DNA-binding protein probably involved in initiating transcription of the gene for ribosomal RNA 5S and maintaining the stability of transcription of other control genes. The htfIIA polynucleotides and polypeptides are used to make therapeutic or diagnostic compositions for diseases associated with disorders of transcriptional control, particularly cancer or other inherited diseases. The htfIIA polynucleotide can also be used to detect anomalies in gene transcription, particularly for diagnosis of inherited disease, also for studying diseases involving hTFIIIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New nucleic acid encoding human transcription factor IIIA, treatment and diagnosis of cancer and inherited disease.
                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bordon-Pallier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; 666T-AON-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; transcription factor; htfIIIA; ribosomal RNA 5S gene; transcriptional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A human transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HMRI )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200028024-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY93317;
300
                                                                             197
                                                                                                                                                            129
                                                                                                                                                                                       108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000-387419/33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                  69
                                                                                                                                                                                                                                          54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10; Page 40-41; 49pp; French.
                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                œ
                                                                                                                                                                                                                                                                                                                            99;
                                                                                                                                                                                                                                                                                                                                       Similarity
                                           DVCRCPREGCGRTYTTVFNLQSHILSFHEES---RPFVCEHAGCGKTFAMKQSLTRH-AV
                                                                     --LKCPK--CGKGCVGKKGLSSHMLS-HDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNI
                                                                                                                                                                             TKSFKCTFENCQEAFYKHQSLR-HHILSVHEKTLTCKQ--CNKVFTRPSKLAQHKLKHHG
                                                                                                                                                                                                                                 PYKCTVDDCDKAFFRKSHLETHIVSHSEKKPFHCSV--CGKGVNSRQHLKRH-EITH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HOECHST MARION ROUSSEL
                      FHDGNIPDDLLKETEVKK 268
                                                                                                                            GSPAYQCDHPGCFKNFQTWSVLQFHIKQSHPK-----
                                                                                                                                                    QKQYICSFEDCKKTFKKHQQLKIHQCQHTNEPLFKCTQEGCGKHFASPSKLKRHAKAHEG
                                                                                                                                                                                                                                                                                         KSISSL-----ISSSSSSR-----PKKYICTYEGCDKAYNRPSLLEQHLRTHSNDR
                                                                                                                                                                                                                                                                                                                                                                               365
                                                                                                                                                                                                        PFVCDYEGCGKAFIRDYHLSRHILTHTGEKPFVCAATGCDQKFNTKSNLKKHFERKHENQ
                                                                                                                                                                                                                                                              EŚVŚŚLTIADAFIAAGESSAPTPPRPALPRRFICSFPDCSANYSKAWKLDAHLCKHTGER
                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                YVC-QKGCSFVAKTWTELLKHVRETHKEEILCEVCRKTFKRKDYLKQHMKTHAPER
                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98FR-00014146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-FR002738.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rocher
                                                                                                                                                                                                                                                                                                                                      17.7%;
31.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        transcriptional
                                                                                                                                                                                                                                                                                                                        54;
                                                                                                                                                                                                                                                                                                                     Score 395.5; DB 3;
Pred. No. 8.2e-23;
4; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                designated htfIIIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA-binding protein; transcription;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        control; cancer.
                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                365;
                                                                                                                                                                                                                                                                                                                     69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             useful
                                                                                                                                                                                                                                                                                                                     Gaps
                                             299
                                                                                                  243
                                                                                                                                                                                164
                                                                                                                          196
                                                                                                                                                     188
                                                                                                                                                                                                                                   107
                                                                                                                                                                                                                                                               83
```

```
δÃ
                                                              뮍
                                                                                           Š
                                                                                                                                                                                                                                            밁
                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
AAG75181
                                                                                                                                                                                    Query Match
Best Local S
Matches 99
                                                                                                                                                                                                                                                                             and treatment of diseases associated with inappropriate P expression. For example, N and P may be used to treat disorders associated with decreased that affect the activity of P by expressing inactive proteins or to supplement the patients own production of P. Additionally, N may be used to produce the colon cancer-associated Ps, by inserting the nucleic acids into a host cell and culturing the cell to express the proteins. N and P can be used in the prevention, diagnosis and treatment of colorectal carcinomas and cancers. AAH37196 to AAH37204 and AB77789 represent sequences used in the exemplification of the present invention. N.B. Bages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027
                                                                                                                                                                                                                                            Sequence 409
                                                                                                                                                                                                                                                                           ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancer-associated nucleic acid molecules (N) and proteins (P), where the proteins are collectively known as colon cancer antigens. The colon cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. Wand P may be used in the prevention, diagnosis and treatment of diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cancer-associated nucleic acid molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAH32943 to AAH37195 and AAG73514 to AAG77788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 11; Page 7452-7454; 9803pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAH34586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-235357/24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ruben
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HUMA-) HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-SEP-2000; 2000WO-US026524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          colorectal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human colon cancer antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200122920-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAG75181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAG75181
                                                                                                                                                                                                                                                                          of publication, m
052, 7921 and 7922
                                                               113
      173
                                   108
                                                                                           54
                                                                                                                         53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ,
MS
                                                                                                                                                      æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          colon cancer; o
ctal carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cacids encoding 4277 human for preventing, diagnosing
                                                                                                                                                                                                Similarity
                            TKSFKCTFENCQEAFYKHQSLR-HHILSVHEKTLTCKQ--CNKVFTRPSKLAQHKLKHHG
QKQYICSFEDCKKTFKKHQQLKIHQCQHTNEPLFKCTQEGCGKHFASPSKLKRHAKAHEG
                                                               PFVCDYEGCGKAF
                                                                                     PYKCTVDDCDKAFFRKSHLETHIVSHSEKKPFHCSV--CGKGVNSRQHLKRH-EITH---
                                                                                                                   ESVSSITIADAFÍAAGESSAPTPPRPALPRRFÍCSFPDCSANYSKAWKLDAHLCKHTGER
                                                                                                                                                      KSISSI----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Barash SC,
                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                              AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0157137P
99US-0163280P
                                                                                                                                                     ---ISSSSSR---
                                                                                                                                                                                                17.7%;
31.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     colon cancer
                                                           IRDYHLSRHILTHTGEKPFVCAANGCDQKFNTKSNLKKHFERKHENQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Birse
                                                                                                                                                                                 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein SEQ
                                                                                                                                                                                             Score 395.5; DB 4
Pred. No. 9.6e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CE,
                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          c antigen; diagnosis; detection;
13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   colon cancer-associated polypeptides, and/or treating colorectal cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rosen CA;
                                                                                                                                               --PKKYICTYEGCDKAYNRPSLLEQHLRTHSNDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IJ
                                                                                                                                                                                                          DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NO:5945
                                                                                                                                                                                 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 represent human colon and proteins (P), where
                                                                                                                                                                              Indels
                                                                                                                                                                                                           Length
                                                                                                                                                                                                           409;
                                                                                                                                                                              69;
                                                                                                                                                                            Gaps
```

164

172

107

232

112

53

16

```
RESULT 11
AAR91305
ID AAR91305
AC AAR91
XX AR91
XX Trans
XX Human
KW EP704
XX EP704
XX EP704
XX EP704
XX EP704
XX EP704
XX EP704
XX EP704
XX EP704
XX EP704
XX EP704
XX EP704
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706
XX EP706

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                       В
                                                                                                            Š
Ś
                                                                                                                                                                                                Query Match
Best Local (
                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                 The sequence represents human transcription factor-IIIA (hTFIIIA), a DNA binding protein which is necessary for the initiation of 55 RNA gene transcription, binding to an internal control region of the 58 gene. The protein contains 9 zinc finger domains, which are homologous to the C2H2 finger domains of Xenopus TFIIIA, except for the 6th finger domain, which has only 3 amino acid residues between 2 cysteine residues, instead of 5 amino acid residues for Xenopus TFIIIA. The protein (optionally in recombinant form) and encoding gene may be used in diagnosis, identification or therapy of hereditary diseases such as cancer, or other diseases resulting from abnormal transcriptional control, and to analyse the mechanisms involved in their activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               zinc finger; diagnostic; probe; transcription control;
cancer; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; transcription factor-IIIA; hTFIIIA; DNA binding protein; ribosome;
zinc finger; diagnostic; probe; transcription control; antitumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR91305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR91305 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EP704526-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Transcription factor-IIIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human Transcription Factor III A gene - useful in regulation of transcription and for diagnosis and treatment of e.g. cancer related
                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fujiwara T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (SAKA ) OTSUKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1996-173033/18
     54
                                                          67
                                                                                                                 œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT14037,
                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DVCRCPREGCGRTYTTVFNLQSHILSFHEES---RPFVCEHAGCGKTFAMKQSLTRH-AV 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSPAYQCDHPGCFKNFQTWSVLQFHIKQSHPK--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VHD---PDKKKMKLKVKK 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FHDGNI PDDLLKETEVKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --LKCPK---CGKGCVGKKGLSSHMLS-HDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----YVC-QKGCSFVAKTWTELLKHVRETHKEEILCEVCRKTFKRKDYLKQHMKTHAPER
                                                                                                                                                                                                                                                                                     423
     PYKCTVDDCDKAFFRKSHLETHIVSHSEKKPFHCSV--CGKGVNSRQHLKRH-EITH---
                                                          ESVSSLTIADAFIAAGESSAPTPPRPALPRRFICSFPDCSANYSKAWKLDAHLCKHTGER
                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                     ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PHARM CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94JP-00211022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95EP-00113908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT14038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17pp; English.
                                                                                                                                                                                                17.7%;
30.8%;
                                                                                                                    ISSSSSR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shimada
                                                                                                                                                                            56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268
                                                                                                                                                                                                      Score 395.5; DB Pred. No. 1e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ķ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA
                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ozaki
                                                                                                                    -PKKYICTYEGCDKAYNRPSLLEQHLRTHSNDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ζ,
                                                                                                                                                                                                                                   В
                                                                                                                                                                            95;
                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                Length
                                                                                                                                                                               Indels
                                                                                                                                                                               69;
                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                               or other analyse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                196
              107
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                               03-FEB-2000;
27-APR-2000;
20-JUN-2000;
                                                                                                                                                       Tang
Ma Y,
                                                                                                                                                                                                                                                                                                                                                        tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                         06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAM78947
                                                                                                                                                                                                                                                                                                    09-AUG-2001.
                                                                                                                                                                                                                                                                                   05-FEB-2001;
                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                            vaccine;
                                                                                          Nucleic acids encoding in diagnosis and gene t
                                                                                                                                                                                                                              01-SEP-2000;
                                                                                                                     N-PSDB;
                                                                                                                                                                                                                      L5-SEP-2000;
                                                                                                                                                                                                                                       19-JUL-2000;
                                                                                                                                             g YT, Liu C,
Y, Zhao QA,
AJ, Yang Y,
                                                                                                                                               AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    127
                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            197
                                                                                                                              2001-476283/51.
                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                  e; peptide therapy; stem cell growth factor; haematopoiesis; growth factor; immunomodulatory; cancer: lenkaemia.
                                                                                                                                                                                  HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAK52080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QKQYICSFEDCKKTFKKHQQMKIHQCQNTNEPLFKCTQEGCGKHFASPSKLKRHAKAHEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TKSFKCTFENCQEAFYKHQSLR-HHILSVHEKTLTCKQ--CNKVFTRPSKLAQHKLKHHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           --LKCPK--CGKGCVGKKGLSSHMLS-HDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GSPAYOCDHPGCFKNFQTWSVLQFHIKQSHPK---
                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FHDGNI PDDLLKETEVKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DVCRCPREGCGRTYTTVFNLQSHILSFHEES---RPFVCEHAGCGKTFAMKQSLTRH-AV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----YVC-QKGCSFVAKTWTELLKHVRETHKEEILCEVCRKTFKRKDYLKQHMKTHAPER
                                                                                                                                                                                                   2000US-00654936.
2000US-00663561.
2000US-00693325.
2000US-00728422.
                                                                                                                                                                                                                                       2000US-00560875.
2000US-00598075.
2000US-00620325.
                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                     2001WO-US004098
                                                                                                                                                                                                                                                                  2000US-00496914
                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 1609.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -PDKKKMKLKVKK 372
                                                                                                                                               Wang D, W
Wejhrman
                                                                                                                                                                                                                                                                                                                                                                                      cell proliferation; cell differentiation; gene therapy;
                                                                                                                                                                Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                          polypeptides with cytokine-like activities, useful therapy.
                                                                                                                                                Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                             622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         268
                                                                                                                                                Asundi V, Zh
J, Zhang J,
Goodrich R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA
                                                                                                                                                          Zhou P, 3
J, Ren F,
                                                                                                                                                                   χ'n
                                                                                                                                                          u C,
Chen
                                                                                                                                                         Cao Y;
R, War
                                                                                                                                                           Wang ZW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      164
```

The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating

or

to

20; Page 3945-3946; 6221pp;

English.

•

```
RESULT 13
AAM79931
ID AAM79
XX AAM79
XX AAM79
XC AAM79
XC AAM79
XC AAM79
XX Humar
XX Humar
XX Homo
XX Homo
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX WO20(
XX W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ДЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Simi
Matches 123;
  03-FEB-2000;
27-APR-2000;
20-JUN-2000;
19-JUL-2000;
01-SEP-2000;
15-SEP-2000;
20-OCT-2000;
30-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                 Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation.
                                                                                                                                                                                                                                 05-FEB-2001;
                                                                                                                                                                                                                                                                                                                                  WO200157190-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAM79931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAM79931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        activity, tissue growth factor activity, immunomodulatory activity and activiny/inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the seguence listing were missing at the time of publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KCEECGKAF--HLSTHLTTHKILHTGEKPYRC--RECGKAFNHSATLSSHKKIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YKCEECGKAFN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LKETEVKKLENLLDØGSKLNNLHELET--EKLKVEEDEEDEEDS----LDEKRSDVRSDSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ECGKAFIWSSVLTRHKRVHTGEKPYKCEE--CGKAFKYSSTLSSH-KRSHTGEKPYKCEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGKAFVASSTLSKHEIIH---TGKKPYKCEEC--GKAFNOSSSLTKHKKI-HTGEKP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNIFHDGNIFDDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YVCEECGKAFKYSRILTTHKRIHTGEKPYKCNKCGKAFIASSTLSRHEFIHMGKKHYKCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLRHH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KPYIC--BECGKAFKYSSALNTHKRIHTGEKPYKC--DKCDKAFIASSTLSKHEIIHTGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KPYKCEECGKAFNQSSTLTKHKKIHTGEKPYKC--EECGKAFNQSSTLTKHKKIHTGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           622 AA;
; 2000US-00496914.

2000US-00560875.

2000US-00598075.

; 2000US-00620325.

; 2000US-00654936.

; 2000US-006533561.

; 2000US-00693325.

; 2000US-00728422.
                                                                                                                                                                                                                            2001WO-US004098.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ID NO 3577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---ILSVH-----EKTLTCKQCNKVFTRPSKLAQHKLKH------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17.7%;
29.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ÓSŚSĹTKHKKIHTGEKPYKCEECGKAFNOSSTLIKHKKIHTREKPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -HGGSPAYQCDHPGCFKNFQTWSVLQFHIKQSH---PKLKCPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score; Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     395; DB 4;
No. 1.8e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 622;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
```

```
RESULT 14
ABG18386
ID ABG18
XX
AC ABG18
XX
AC ABG18
XX
DT 18-FE
XX
DE Novel
                                                                                                                                                                            Ş
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                뫄
                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to polynucleotides (AAK51456-AAK51435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activity, insureduced activity and may be useful in the diagnosis and/or inflammation. Note: Records for SEQ ID NO 2110 (AAK52581), 211 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 631 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 20; Page 388; 6221pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tang
Ma Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xue AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g YT, Liu c,
Y, Zhao QA, Wa
Yang Y,
                                                                                                                                                   549
                                                                                                                                                                             316
                                                                                                                                                                                                         492
                                                                                                                                                                                                                                     261
                                                                                                                                                                                                                                                                441
                                                                                                                                                                                                                                                                                            202
                                                                                                                                                                                                                                                                                                                      384
                                                                                                                                                                                                                                                                                                                                                 163
                                                                                                                                                                                                                                                                                                                                                                           324
                                                                                                                                                                                                                                                                                                                                                                                                     132
                                                                                                                                                                                                                                                                                                                                                                                                                                  266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-476283/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
                                                                                                                                               KCEECGKAF--HLSTHLTTHKILHTGEKPYRC-
                                                                                                                                                                      SAQRSIKSFTASLEGSKSVSKLISNSGKKINÇPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                          TKETEAKKTENTTDÓGSKÍNNTHETEL--EKTKAEEDEEDEEDS---TDEKKSDAKSDSW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAK53064.
                                                                                                                                                                                                                                                                                 CGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNIFHDGNIFDDL
                                                                                                                                                                                                                                                                                                             ECGKAFIWSSVLTRHKRVHTGEKPYKCEE--CGKAFKYSSTLSSH-KRSHTGEKPYKCEE
                                                                                                                                                                                                                                                            CGKAFVASSTLSKHEIIH---TGKKPYKCEEC-
                                                                                                                                                                                                                                                                                                                                                                    YVCEECGKAFKYSRILTTHKRIHTGEKPYKCNKCGKAFIASSTLSRHEFIHMGKKHYKCE
                                                                                                                                                                                                                                                                                                                                                                                                                          KPYKĆEEĆGKAFNOSSTLTKHKKIHTGEKPYKĆ--EECGKAFNOSSTLTKHKKIHTGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                  KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLRHH------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KPYIC--EECGKAFKYSSALNTHKRIHTGEKPYKC--DKCDKAFIASSTLSKHEIIHTGK 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                                                                                                                                         YKCEECGKAFN--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  s encoding polypeptides and gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  encoding
                                                                                                                                                                                                                                                                                                                                                                                                -----ILSVH-----EKTLTCKQCNKVFTRPSKLAQHKLKH--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wang D, Wang , Wejhrman T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17.7%;
29.7%;
                                                                                                                                                                                                   QSSSLTKHKKIHTGEKPYKCEECGKAFNQSSTLIKHKKIHTREKPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42;
                                                                                                                                                                                                                                                                                                                                         HGGSPAYQCDHPGCFKNFQTWSVLQFHIKQSH---PKLKCPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 395; DB 4;
Pred. No. 1.9e-22;
2; Mismatches 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Asundi V,
JJ, Zhang
Goodrich R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cytokine-like
                                                                                                                                              -RECGKAFNHSATLSSHKKIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhou P,
J, Ren
                                                                                                                                                                                                                                                          -GKAFNQSSSLTKHKKI-HTGEKP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 631;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 т
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Х'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              activities,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cao
R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Υ,
                                                                                                                                              598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WZ,
                                                                                                                                                                                                   548
                                                                                                                                                                                                                                                         491
                                                                                                                                                                                                                                                                                                              440
                                                                                                                                                                                                                                                                                                                                          201
                                                                                                                                                                                                                                                                                                                                                                      383
                                                                                                                                                                                                                                                                                                                                                                                              162
                                                                                                                                                                                                                                                                                                                                                                                                                          323
                                                                                                                                                                                                                                                                                                                                                                                                                                                     131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to
```

Novel human diagnostic protein #18377

18-FEB-2002 ABG18386; ABG18386

(first

entry)

standard;

protein;

632

₽

```
뮍
                                                                                                         Ş
                                                                                                                                                 밁
                                                                                                                                                                                    Ś
                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                            8
밁
                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CC and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed conditions of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed contivity of (II) or to treat disease states involving (II). (II) is considered in tissue, as molecular weight markers and as a food conjugation of the spression of the state involving and its binding partners are useful in medical imaging confisites expressing (II). (I) and (II) are useful in medical imaging confisites expressing (II). (I) and (II) are useful in medical imaging confisites expressing (II). (II) and (II) are useful for treating disorders involving abservant protein expression or biological activity. The conjugation of the special confision of mutations confidence of general confision of the traits to assess biodiversity and to produce other types of data and products dependent on DNA and camino acid sequences. Abg00010-Abg30377 represent novel human diagnostic consists of the invention of the traits to assess biodiversity amino acid sequences. Abg00010-Abg30377 represent novel human diagnostic consists of the invention where traits to assess biodiversity amino acid sequences.
                                                                                                                                                                                                                                                                                                        Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to isolated polynucleotide sequences. (I) is useful as hybridisation probes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-MAR-2001; 2001WO-US008631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                   amino acid sequences of the invention. Note: The sequence data for the patent did not appear in the printed specification, but was obtained electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                 Sequence 632
                                                                                                                                                                                                                                                                                                                                                                                                                   ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-639362/73
                                       163
                                                                                                                                                   267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20; SEQ ID NO 48745; 103pp; English
 385
                                                                         325
                                                                                                               132
                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                          123;
                                                                                                                                                                                                                                                                  23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAS82573
                                                                                                                                                                                                                                                                                                                            Similarity
ECGKAFIWSSVLTRHKRVHTGEKPYKCEE---CGKAFKYSSTLSSH-KRSHTGEKPYKCEE
                                                                                                                                                 KPYKCEECGKAFNQSSTLTKHKKIHTGEKPYKC--EECGKAFNQSSTLTKHKKIHTGEKP
                                                                                                                                                                                      KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLRHH---
                                                                                                                                                                                                                                                                KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK 82
                                                                           YVCEECGKAFKYSRILTTHKRIHTGEKPYKCNKCGKAFIASSTLSRHEFIHMGKKHYKCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-00540217.
2000US-00649167.
                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Liu C,
                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                                                                                                                                -BECGKAFKYSSALNTHKRIHTGEKPYKC--DKCDKAFIASSTLSKHEIIHTGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tang
                                                                                                                                                                                                                                                                                                                          17.7%;
                                                                                                               --ILSVH-----EKTLTCKQCNKVFTRPSKLAQHKLKH------
                                                                                                                                                                                                                                                                                                          42;
                                     HGGSPAYQCDHPGCFKNFQTWSVLQFHIKQSH---PKLKCPK
                                                                                                                                                                                                                                                                                                                          Score 395; DB 4;
Pred. No. 1.9e-22;
                                                                                                                                                                                                                                                                                                            Mismatches 157;
                                                                                                                                                                                                                                                                                                                                                Length 632;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (I) and polypeptide (II)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polymerase
                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                              92;
                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                           324
                                             201
                                                                                                                                                                                                                                      266
                                                                                                                                                                                              131
                                                                                 384
                                                                                                                     162
         441
```

```
ARSIULT 15
ARGI6953
ID ARGI6953
ID ARGI6953
AC ARGI6953
AC ARGI6953
AC ARGI6953
AC ARGI6953
AC ARGI6953
AC ARGI6953
AC ARGI6953
AC ARGI6953
AC ARGI6953
AC ARGI6953
AC Homo
AC Homar
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARGI695
AC ARG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
              sequences. (I) is useful as hybridisation probes, polymerase chain
CC reaction (PCR) primers, oligomers, and for chromosome and gene mapping,
cc and in recombinant production of (II). The polymucase chain
CC in diagnostics as expressed sequence tags for identifying expressed
CC genes. (I) is useful in gene therapy techniques to restore normal
CC activity of (II) or to treat disease states involving (II). (II) is
CC activity of in tissue, as molecular weight markers and as a food
CC golypeptide in tissue, as molecular weight markers and as a food
CC golypeptide in tissue, as molecular weight markers and as a food
CC golypeptide in tissue, as molecular weight markers and as a food
CC golypeptide and polynucleotide sequences have applications in
CC diagnostics, forensics, gene mapping, identification of mutations
CC diagnostics, forensics, gene mapping, identification of mutations
CC and to produce other types of data and products dependent on DNA and
CC and to produce other types of data and products dependent on DNA and
CC amino acid sequences of the invention. Note: The sequence data for this
CC patent did not appear in the printed specification, but was obtained in
CC electronic format directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; chromosome mapping; gene mapping; gene therapy; forensic food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel human diagnostic protein #16944.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABG16953 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-MAR-2000; 2000US-00540217
23-AUG-2000; 2000US-00649167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-MAR-2001; 2001WO-US008631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to isolated polynucleotide (I) and polypeptide (II)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-639362/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 20; SEQ ID NO 47312; 103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drmanac RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           550 KCEECGKAF--HLSTHLTTHKILHTGEKPYRC--RECGKAFNHSATLSSHKKIH 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAS81140.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAORSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LKBTEVKKLENLLDQGSKLNNLHELET--EKLKVEEDEEDEEDS----LDEKRSDVRSDSM 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGKAFVASSTLSKHEIIH---TGKKPYKCEEC--GKAFNQSSSLTKHKKI-HTGEKP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNIFHDGNIPDDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YKCEECGKAFN----QSSSLTKHKKIHTGEKPYKCEECGKAFNQSSTLIKHKKIHTREKPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΤY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         forensic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               549
```

```
당
                                                                                                   P &
       뮍
                          S
                                                                       δÃ
                                                                                                                                             Дb
                                                                                                                                                                     Λδ
                                                                                                                                                                                                 ДĎ
                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                   SQ
                                                                                                                                                                                                                                                                                                                                        Query Match 17.7%; Score 395; DB 4; Length 719; Best Local Similarity 30.0%; Pred. No. 2.2e-22; Matches 121; Conservative 51; Mismatches 174; Indels 58; Gaps
                                                                                                                                                                                                                                                                                                                                                                                               Sequence 719 AA;
                                             391 SWV---SVLNKHKKIHAGKKFYKCEECGKDFNQSSHLTTHKRIHTGEKPYKCEECGKAF- 446
                                                                                             447 -SKASTLTAHKTIHAGEKPYKC--EECGKAFURSSNLMEHKRIH 487
                      326 ASIEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLKWH 369
                                                           271 NLLDQGSKLNNLHELETEK--LKVEEDBEDEEDS---LDEKRSDVRSDSMSAQRSIKSFT 325
                                                                                                             212 LSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNIFHDGNIFDDLLKETEVKKLE 270
                                                                                                                                            280 WSSTLTKHKIIHTGEKPYKCEECGKAFTTFSSLTKHKVIHTGEKHYKCEECGKVFSWSSS 339
                                                                                                                                                                            173
                                                                                                                                                                                           161 ECGKAFSKASTLTAHKTIHAGEKPYKCEECGKAFNRSSNLMEHKRIHTGEKPCKCEECGK 220
                                                                                                                                                                                                                                                           61 DCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQE 120
```

Search completed: July 22, 2004, 16:46:08 Job time: 56 secs

This Page Blank (uspto)

٠,

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein -
                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
              495

396.5

395.5

395.5

374.5

374.5

375.5

375.5

375.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

363.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

364.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.5

365.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
Bd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              837.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            p.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             derived by analysis of the total score distribution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR 78:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
          237.6
117.8
117.8
117.8
117.8
116.8
116.7
116.7
116.7
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
116.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      283366 seqs, 96191526 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSESDETKSISSLISSSSSSS...........PLVKKARMDLLPNETSVISR 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               July 22, 2004, 16:44:10 ; Search time 22 Seconds (without alignments) 1801.405 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-831-804-3
2229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length DB
       3595
1191
13500
5420
5420
5420
3383
3393
594
4791
4888
6886
6886
3397
3397
T12488
S60520
A37107
A34612
S47072
S06578
S00549
JC1442
                                                                                                                                                                                                                                                                                                                       S06556
S68858
                                                                                                                                                                                                                                                                                                                                                                                             A35659
I37570
S65088
I54338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G01496
A32891
S06546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A54661
B32891
JN0533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  $20050
T37676
$26823
G02075
I38937
$35305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 I48668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    283366
                                                              spermatogenesis
zinc finger prot
finger protein H
finger protein (
                                                                                                                                                                                                                                                                                                     zinc finger protein }
finger protein }
zinc finger protein |
finger protein |
finger protein |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            zinc finger protein -
zinc finger protein -
zinc finger prot
zinc finger protein zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger zinger 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    finger protein ifinger protein krueppel-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                zinc-finger pro
zinc finger prot
transcription re
DNA/RNA-binding
                                                                                                                                                                                                                                      transcription f
                                                                                                                                                                                                         finger protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               transcription f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
```

4 5	44	43	42	41	40	39	38	37	36	3	3	ü	2	<u>1</u>	30
329	329	329.5	330.5	331	332	332	334.5	335.5	336	337	337	337.5	338	338	339
14.8	14.8	14.8	14.8	14.8	14.9	14.9	15.0	15.1	15.1	15.1	15.1	15.1	15.2	15.2	15.2
728	589	496	732	794	701	536	280	428	553	595	469	728	383	247	411
2	N	N	N	N	N	N	N	N	N	N	N	2	N	N	Ν
A54603	I38598	T08674	S47073	\$59069	T14757	S06548	S06572	S03677	S22954	JC7779	I38600	A48830	C32891	S47070	S10245
transcription fact	zinc finger protei	probable finger pr	finger protein HZF	Zl3 protein - mous	₹.	protein	finger protein (c)	n ie tord	finger protein zfo	Krueppel-associate	zinc finger protei	_		finger protein HZF	finger protein, te

ALIGNMENTS

RESULT 1 S20050

transcription factor IIIA - yeast (Saccharomyces cerevisiae)
N;Alternate names: protein P9677.9; protein YPR186c; TFC2 protein
C;Species: Saccharomyces cerevisiae
C;Date: 16-Sep-1992 #sequence revision 16-Sep-1992 #text_change 01-Dec-2000
C;Accession: S20050; A44086; S58816
R;Archambault, J.; Milne, C.A.; Schappert, K.T.; Baum, B.; Friesen, J.D.; Segall, J.
J. Biol. Chem. 267, 3282-3288, 1992
A;Title: The deduced sequence of the transcription factor TFIIIA from Saccharomyces ce
A;Reference number: S20050; MUID:92147684; PMID:1737784
A;Accession: S20050

cont fact	s pr otei HZF	1 - m fact prote ZNF	otei XFO otei (cl	i pML fact fact 1 (cl	corei corei corei	rotei repr repr	fact	ed,
Qy 118 CQEAFYKHQSLRHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPG 175	QY 58 TVDDCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFEN 117	QY 1 MSESDETKSISSLISSSSSSRPKKYICTYEGCDKAYNRPSLLEQH-LRTHSNDRPYKC 57	Query Match 37.6%; Score 837.5; DB 2; Length 429; Best Local Similarity 43.7%; Pred. No. 1.2e-43; Matches 174; Conservative 62; Mismatches 135; Indels 27; Gaps 11;	A;Gene: SGD:PZF1; TFIIIA; TFC2 A;Cross-references: SGD:S0006390; MIPS:YPR186C A;Map position: 16R C;Superfamily: zinc finger protein ZFP-36; LIM metal-binding repeat homology C;Keywords: DNA binding; nucleus; transcription factor; zinc finger	A; Folecule type: DNA A; Residues: 1-429 <mil> A; Cross-references: EMBL:U25841; NID:g786295; PID:g786305; MIPS:YPR186c C; Genetics:</mil>	submitted to the EMBL Data Library, April 1995 A;Description: The sequence of S. cerevisiae cosmid 9677. A;Reference number: S58816 A;Accession: S58816	A;Reference number: A44086; MUID:92237295; PMID:1570325 A;Accession: A44086 A;Molecule type: DNA A;Residues: 1-429 <woy> A;Cross-references: GB:M90638 R;Miller N</woy>	A; MCCession: \$20050 A; Molecule type: DNA A; Residues: 1-429 < ARC> A; Residues: 1-429 < CARC> A; Cross-references: EMBL: M80611; NID: g172902; PIDN: AAB08014.1; PID: g172903 R; Woychik, N.A.; Young, R.A. Proo. Natl. Acad. Sci. U.S.A. 89, 3999-4003, 1992 A; Title: Genes encoding transcription factor IIIA and the RNA polymerase common subuni

```
A;Molecule type: DNA
A;Residues: 1-374 <MCD>
A;Cross-references: EMBL:AL132675; PIDN:CAB59689.1; GSPDB:GN00066; SPDB:SPAC144.09c
A;Experimental source: strain 972h-; cosmid c144
C;Genetics: C:Genetics: Cosmid c144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zinc-finger protein - fission yeast (Schizosaccharomyces) (Species: Schizosaccharomyces pombe C;Species: Schizosaccharomyces pombe C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_0;Accession: T37676 R;McDougall, R.C.; Rajandream, M.A.; Barrell, B.G.; Davis submitted to the EMBL Data Library, October 1999 A;Reference number: Z21736 A;Accession: T37676 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Status: preliminary;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Introns: 50/3
C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                               Š
                                                                       B
                                                                                               . 5
                                                                                                                                               g
                                                                                                                                                                                Ş
                                                                                                                                                                                                                     Вb
                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Gene: SPDB: SPAC144.09c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local \
123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    261 MSFSRKHDLLTHYGSIHTEEDIPLELKYKISDIQQL--VQDHGVQLGN-----SKHSNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    141
                                                                                                                                                                                                                         193
                                                                                                                                                                                                                                                              185
                                                                                                                                                                                                                                                                                                   133
                                                                                                                                                                                                                                                                                                                                    131
359
                                      355
                                                                         309
                                                                                                              297
                                                                                                                                                   250
                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                           73
                                                                                                                                                                                                                                                                                                                                                                                                              75
                                                                                                                                                                                                                                                                                                                                                                                                                                               13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SRTFKTKEKYEKHIDKHKVHELKLKILQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DRMFSREYDLRRHL---KWHDDNLQRIESFLNSIEKEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDEEDEEDSLDEKRSDVRSDSMSAQRSIKSFTASLE-GSKSVSKLISNSGKKINCPKNNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GKFAKKNELVEHYNIFH-DGNIPDDL-LKETEVKKLENLLDQGSKLNNLHELETEKLKVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCKEFRIWSQLQSHIKNDHPKLKCPICSKPCVGENGLQMHMIIHDDSLVTKNWKCHICPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CEKNEQTWSVLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHWLSHDDSTMIKIWTCDYCDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CNLRFYKHPQLRAHILSVHLHKLTCPHCNKSFQRPYRLRNHISKHHDPEVENPYQCTFAG
                                                                                                                                                                                                                                                            VLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDV----GKFAK
                                                                                                                                                                                                                                                                                                                                      HILSVHEKTL----TCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGC--FKNFQTWS 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QDEEKISNRLRKRRKLTENNNVEFLQNEVDLEKRLESGENGLNLLLNTVGRKYRCFYNNC
                                                                                                                                                                                    KNELVEHYNIFHDGNIP----DDLLKETEVK-KLENLLDQGSKLNNLHELETEKLKVEEDE
                                                                                                                                                                                                                                                                                                   HISACHTHLLPYPCTYQDCELRFATKQKLQNHVNRAHEKIISYSCPHESCVGHEGFEKWS
                                                                                                                                                                                                                                                                                                                                                                         HKRCHTNVKPFSCHYDGCDAQFYTQQHLERHIEVHRKPKPYACTWEGCDECFSKHQQLRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SKNILRSAKKIFHCPYEECGKKYSRPSILEQHIRTHSNERPFVCDYTGCSKAFYRKSHIKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLET 74
 RFKRLYDMHRHLNSH 373
                                      MESREYDLRRHLKWH 369
                                                                         IEGVAIHDQKEKELSSNLVSDVAKKIINEVTG--HGYK-----
                                                                                                            EDEEDSLDEKRSDVRSDSMS--AQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDR
                                                                                                                                                   SSALKKHISVIHEGNMAFHCDSCGTKFGYKHMLQRHLERGT-CKKAHKPYINECGIKHDG
                                                                                                                                                                                                                         QLQNHIREAHVP-SCSICGRQFKTAAHLRHHVVLH--QTTLEERKTYHCPMEGCKKSFTR
                                                                                                                                                                                                                                                                                                                                                                                                            HIVSHSEKKPFHCSV--CGKGVNSROHLKRHEITH--TKSFKCTFENCQEAFYKHQSLRH 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     zinc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   finger protein ZFP-36; LIM metal-binding repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Score 495; DB 2; Length 37; Pred. No. 5.7e-23; 58; Mismatches 160; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----EKEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B.G.; Davis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #text_change 01-Dec-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 374;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pombe)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۳
-
                                                                             -EAREYSCSFPECNY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Churcher,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    വ
ഷ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           293
                                                                                                                                                                                                                                                                                                       192
                                                                                                                  354
                                                                                                                                                       308
                                                                                                                                                                                            296
                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                     72
```

R; Poncelet, D.A.

submitted to the EMBL

Data Library,

September

C;Species: Homo sapiens (man)
C;Date: 21-Dec-1996 #sequence
C;Accession: G02075

#sequence_

_revision

06-Jun-1997

#text

_change

01-Dec-2000

transcription repressor zinc finger protein 85 - human

G02075

```
RESULT 3
$26823
zinc finger protein ZNP43 - human
zinc finger protein finger protein kox27
N;Alternate names: zinc finger protein kox27
C;Species: Homo sapiens (man)
C;Species: Jan-1995 #sequence revision 13-Jan-1995 #text_change 01-Dec-2000
C;Accession: $26823; 137967; $10416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R:Thiesen, H.J.

New Biol. 2, 363-374, 1990

A;Title: Multiple genes encoding zinc finger domains are A;Reference number: 137949; MUID:91145339; PMID:2288909

A;Accession: 137967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GDB:128653
A;Map position: 19p13.1-19p12
C;Superfamily: zinc finger protein ZFP-36; LIM metal-binding C;Keywords: DNA binding; zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Accession: S26823
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-803 <LOV>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Lovering, R.; Trowsdale, J. Nucleic Acids Res. 19, 2921-2928, 1991 Nucleic Acids Res. 19, 2921-2928 related zinc fingers is A;Title: A gene encoding 22 highly related zinc fingers is A;Reference number: S26823; MUID:91279444; PMID:1711675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
A; Residues: 476-531 <THI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Gene: GDB: ZNF43; HTF6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Cross-references: EMBL: X52358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references:
                                                                                                  5
                                                                                                                                              밁
                                                                                                                                                                               Š
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                      ž
                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                           皮
                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                               8
                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                         648
                                                                                                              294
                                                                                                                                                  594
                                                                                                                                                                                                                           538
                                                                                                                                                                                                                                                              177
                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                               423
                                                                                                                                                                                                                                                                                                                                                                                                                                                         367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121;
                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                DDCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT---KSFKCTFEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SESDETKSISSLISSSS--SRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTV
                                                                                                                                                                                                                         GKAFNHFSILTKHKRIHTGEKPYKCEECGKAFTQSSNLTTHKKIH---TGEKFYKCEEC-
                                                                                                                                                                                                                                                                                                                     CQBAFYKHQSL-RHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGC
                                                                                                                                                                                                                                                                                                                                                                               EECGKAFNWPSTLTKHNRIHTGEKPYKCEVCGKAFNQFSNLTTHKRIHTAEKPYKC--EE
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TECGEAFSRSSNLTKHKKIHTEKKPYKC-
                                                                                                                                                                                                                                                          FKNFQTWSVLOFH--IKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCD
                                                                                                                                                                                                                                                                                                    CGKAFSRSSNLTKHKKIHIEKKPYKCEECGKAFKWSSKLTEHKITHTGEKP-YKCEE--C
                                   NCDRMFSREYDLRRHLKWH 369
                                                                                                            E-DEEDEEDSLDEKRSDVRSDS--MSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKN
                                                                                                                                                                                   VGK-FAKKNELVEHYNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVE
                                                                         ECGKAFKWSSTLTKHKI IHTGEKPYKCEECGKAF
                                                                                                                                                  -GKAFTQSSNLTTHKKI-HTGGKP---YKCEECGKAFNQFSTLTKHKIIH-TEEKPYKCE
-CGKAFNRPSNLIEHKKIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL: X59244; NID: g38031; PIDN: CAA41932.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NID:g34160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 400; DB 2;
Pred. No. 7.5e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                           -BECGKAFKWSSKLTEHKLTHTGEKPYKC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIDN:CAA36584.1;
                                                                              -KLSSTLSTHKI IHTGEKPYKCEK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 803;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PID:g930090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PID: g38032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lymphoid
                                                                                                                  350
                                                                                                                                                       647
                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                        117
                                                                                                                                                                                                                                                                                                                                                                                                                                                             422
                                                                              704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59
                                                                                                                                                                                             293
                                                                                                                                                                                                                                593
                                                                                                                                                                                                                                                                                                           537
                                                                                                                                                                                                                                                                                                                                                 176
                                                                                                                                                                                                                                                                      234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ľ.
```

٩

```
RESULT 5

138937

DNA/RNA-binding protein - human (fragment)
C;Species: Homo sapiens (man)
C;Atte: 29-May-1998 #sequence_revision 29-May-1998 #text_
C;Accession: 138937

R;Drew, P.D.; Nagle, J.W.; Canning, R.D.; Ozato, K.; Bidd.
Gene 159, 215-218, 1995
A;Title: Cloning and expression analysis of a human cDNA |
A;Reference number: 138937; MUID:95347600; PMID:7622052
A;Accession: 138937
                               δÃ
                                                                     Вb
     뫄
                                                                                                 γ
                                                                                                                                                                                                     A; Cross-referer C; Superfamily:
                                                                                                                                                                                                                                      A; Residues: 1-363 < RES>
                                                                                                                                                                                                                                                    A; Molecule type: mRNA
                                                                                                                                                                                                                                                                    A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Reference number: G09169
A;Accession: G02075
A;Status: preliminary; translated
A;Molecule type: mRNA
A;Residues: 1-595 <PON>
A;Cross-references: EMBL:U35376; N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Gene: GDB:ZNF85
A;Cross references: GDB:132279
A;Map position: 19p12-19p12
C;Superfamily: zinc finger prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Genetics:
                                                                                                                                                                                                    Cross-references: EMBL:U20272; NID:g644870; PIDN:AAA75623.1; Superfamily: transcription factor IIIA
                                                                                                                                     Query Match
Best Local Similarity
Matches 99; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
     67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             186
                                    54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                                                    œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                             PYKCTVDDCDKAFFRKSHLETHIVSHSEKKPFHCSV--CGKGVNSRQHLKRH-EITH---
PFVCDYEGCGKAFIRDYHLSRHILTHTGEKPFVCAANGCDOKFNTKSNLKKHFERKHENO
                                                                ESVSSLTIADAFIAAGESSAPTPPRPALPRRFICSFPDCSANYSKAWKLDAHLCKHTGER
                                                                                                    KSISSL----ISSSSSR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LVEHYNIFHDGNIFDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEEDSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCDRMFSREYDLRRHLKWH 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEKRSDVRSDSMSAQRSIKSFTASL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TLTTHRKIHTGEKPYKCEECGKAFKQSSNLTTHKIIHTGEKP-YKCKK--CGKAFNQSAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SSNLIKHKKIHTGEKPYKCEECGKAFNRFSTLTTHKIIHTGEKPYKC--KECGKAFNRSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LQFH--IKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDVCDVGKFAKKNE 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SL-RHHILSVHEKTITCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCEKNFQTWSV 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ISCLTEHSRIHTRVNFYKC--EECGKAFNWSSTLTKHKRIHTGEKPYKC--EECGKAFNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ECGKAFNOSSKLTKHKKIH 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TLTKHKIIHTGE-----KPYKSKECEKAFNQSSKL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQ 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CEKCGKAFNOSSNLTRHKKSHTEEKPYKCEECGKGFKWPSTLTIHKIIHTGEKPYKC--E 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LTTHEVIHTGEKPYKCEKCGKAFNHFSHLTTHKIIH--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ISSLISSSS-SSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       zinc finger protein ZFP-36; LIM metal-binding repeat
                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                              17.7%; Score 395.5; DB 2; 31.1%; Pred. No. 5.9e-17; tive 54; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17.8%; Score 396.5; 31.7%; Pred. No. 8.8e tive 48; Mismatches
                                                                                                                                                                                                                                                                    from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NID:g1017721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                from
                                                                                                                                                                                                                                                                    GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GB/EMBL/DDBJ
                                                                                                 -PKKYICTYEGCDKAYNRPSLLEQHLRTHSNDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8.8e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EGSK----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIDN:AAA79179.1; PID:g1017722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            160;
                                                                                                                                                                                                                                                                                                                                                   K.; Biddison,
                                                                                                                                                                                                                                                                                                                                                                               #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGEKPYKCKEC--GKAFKHSS
                                                                                                                                  Indels
                                                                                                                                                                 Length 363;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SVSKLISNSGKKINCPKN
                                                                                                                                                                                                                                                                                                                   homologous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TEHKKIHTGEKPYE---
                                                                                                                                                                                                                PID:g644871
                                                                                                                                                                                                                                                                                                                                                   W.E.;
                                                                                                                                  69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51;
                                                                                                                                                                                                                                                                                                                                                                                    21-Jul-2000
                                                                                                                                                                                                                                                                                                                   to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        homology
                                                                                                                                                                                                                                                                                                                                                  Becker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                 Xenopus TFIIIA.
 126
                                107
                                                                99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17,
```

```
A; Accession: $35305
A; Molecule type: mRNA
A; Residues: 1-1191 <BEL>
A; Cross-references: EMBL:L11672; NID:g186773;
A; Cross-references: EMBL:L11672; NID:g186773;
                                                                                                                   뮍
                                                                                                                                               Š
                                                                                                                                                                                                      γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  zinc finger protein ZNF91 - human C;Species: Homo sapiens (man) C;Date: 31-Dec-1993 #sequence_revision C;Accession: 33-305 R;Bellefroid, E.J.; Marine, J.C.; Ried, EMBO J. 12, 1363-1374, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
S35305
   밁
                          S
                                                          뭐
                                                                                    8
                                                                                                                                                                              멂
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: Clustered organization of homologous KRAB zinc-finger genes with A;Reference number: 835305; MUID:93223677; PMID:8467795
                                                                                                                                                                                                                                                                                                                                                                        A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                      A;Gene: GDB:ZNF91; HPF7; HTF10
A;Cross-references: GDB:132284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                   ;Genetics:
                                                                                                                                                                                                                                                                                                                                                          ;Keywords:
                                                                                                                                                                                                                                                                                                              Query Match
Best Local
 1130
                                                            1075
                                                                                                                     1019
                                                                                       197
                              254
                                                                                                                                                137
                                                                                                                                                                              961
                                                                                                                                                                                                                                        905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 108
                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                       ion: 19p12-19p12
DNA binding; zinc finger
                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                          TREKPYKC--EECGKAFSQPSHLTTHKRMHTGEKPYKC--EECGKAFSQSSTLTTHKIIH
                                                                                                                                                                                                                                                               SRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSH
GE-----KPYKCEKCCKAFNOSSILTNHKKIHT 1157
                                                                                                                   EKPYKCEECGKAFNRSSKLTTHKIIHTGEKP-YKCEE--CGKAFISSSTLNGH
                                                                                                                                          EKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFHIKQSHPK 196
                                                                                                                                                                         TGEKPYKCEECGKAFRKSSTLTEHKIIHTGEKPYKC--EECGKAFSQSSTLTRHTRMHTG 1018
                           GNIPDDLLKETEVKKLENLLDQGSKLNNLHELET
                                                          EKPYKCEECGKAFSQSSTLTRHKRLH--
                                                                                    ---LKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DVCRCPREGCGRTYTTVFNLQSHILSFHEES-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QKQYICSFEDCKKTFKKHQQLKIHQCQHTNEPLFKCTQEGCGKHFASPSKLKRHAKAHEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TKSFKCTFENCQEAFYKHQSLR-HHILSVHEKTLTCKQ--CNKVFTRPSKLAQHKLKHHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FHDGNI PDDLLKETEVKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GSPAYQCDHPGCFKNFQTWSVLQFHIKQSHPK--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----YVC-QKGCSFVAKTWTELLKHVRETHKEEILCEVCRKTFKRKDYLKQHMKTHAPER
                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -PDKKKMKLKVKK 312
                                                                                                                                                                                                                                                                                                            17.7%;
35.8%;
                                                                                                                                                                                                                                                                                              40;
                                                                                                                                                                                                                                                                                                         Score 393.5; DB 2;
Pred. No. 2.8e-16;
                                                                                                                                                                                                                                                                                              Mismatches 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-Jun-1994 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T.;
                                                          -TGEKPYKCGEC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lecocq,
                                                                                                                                                                                                                                                                                                                                                                                                                                for residue 750 as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -RPFVCEHAGCGKTFAMKQSLTRH-AV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P.J.; Riviere,
                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                         Length
                                                         -GKAFKESSALTKHKIIHT
                                                                                                                                                                                                                                                                                                                                                                                                                                PID:g186774
s Thr and GCT
                                                                                                                                                                                                                                                                                             27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                  -KRIHTR
                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Amemiya,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      enhanced
                                                         1129
                                                                                                                                                                                                                                    960
                                                                                                                  1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                186
                                                                                                                                                                                                                                                               79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  c.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exp
```

Ро

finger protein - African clawed frog C;Species: Xenopus laevis (African claw C;Date: 30-Sep-1989 #sequence_revision C;Accession: S00647

l frog ican clawed

frog)

30-Sep-1989 #text_change

R;Ruiz i Altaba, A.; Perry-O'Keefe, EMBO J. 6, 3065-3070, 1987

embryonic

gene

encoding

a multifingered

protein

ij

Xenopus.

н.;

Melton,

D.A.

RESULT S00647

```
A;Reference number: S00647; MUID:
A;Accession: S00647
A;Molecule type: mRNA
A;Residues: 1-1350 <RUI>
A;Cross-references: EMBL:X06021
A;Note: it is uncertain whether Me
C;Genetics:
                                                                                                                                                                                                                                 zinc finger protein 51 - mouse
N;Alternate names: finger protein zfec12
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 08-Dec-2000
C;Accession: I48668; A40984
R;Burke, P.S.; Don, J.; Wolgemuth, D.J.
Mamm. Genome 5, 387-389, 1994
A;Title: Zfp-51, a murine zinc finger encoding gene mapping to the t-comple.
A;Reference number: I48668; MUID:94319090; PMID:8043957
                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Gene: fin C;Keywords: DNA binding; zinc finger
                                                                           A;Molecule type: mRNA
A;Residues: 1-710 <RES;
A;Cross-references: EMBL:X74855; NID:g488832; PIDN:CAA52847.1; PID:
R;Crossley, P.H.; Little, P.F.R.
Proc. Natl. Acad. Sci. U.S.A. 88, 7923-7927, 1991
A;Title: A cluster of related zinc finger protein genes is deleted
A;Reference number: A40984; MUID:91376058; PMID:1680234
A;Accession: A40984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
A;Cross-references: GB:M74235
C;Genetics:
                              A; Molecule type: mRNA
A; Residues: 672-710 < CRO>
                                                                                                                                                                                                                          A; Reference number: I48668; A; Accession: I48668
                                                               A;Status: preliminary
                                                                                                                                                                                                        A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               222
                                                                                                                                                                                                                                                                                                                                                                                                                                                    732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LDQGSKLNNLHELETEKLKVEEDEEDEEDSLDEKRSDVRSDSMSAQR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -RHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKH-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DLVKHLRTHTGEKPFKCSHCDKKFTERSALAKHQRTHTGEKPYKCS--DCGKEFTQRSNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSLISSSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IKSFTASLEGSKSVSKLISNSGKK-INCPKNNCDRMFSREYDLRRHLKWHD-DNLQRIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FIQKSAL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STMIKIW----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FSHWSTFMKHSKLHSGEKKFQCAECKKGFTQKSDLVKHIRVHTGEKPFKCLLCKKSFSQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ILHQRIHTGERPYKCTLCDRTFIQNSDLVKHQKVHANLPLSDPHTANSPHKCSK--CDLT 511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SFLNHQQTHSREKPYLCSH--CNKGFIQNSDLVKHFRTHTGERPYQCA--ECHKGFIQKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    FHEILIRRENLTRSEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FLN-SIEKEETPEGEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SDLHKHWRIHTGEKPFPCYTCD-KSFTERSALIKHHRT-HTGERPH-----KCSVCQKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FQTWSVLQFHIK--QSHPKLKCPKCGKGCVGKKGLSSHMLSH--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S00647; MUID:88082679; PMID:2826129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -EGSSLVKHRRTHSGEKPYRCPQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16.8%;
27.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---TCDYCDVGKFAKKNELVEHYNIFHDGNIPDDLLKETEVKKLENL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -TKHSRTHTGEKPYPCTQCGKSFIQNSDLVKHQRIHTGEKPYHCTEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    393
                                                                                                                                                                                                                                                                                                                                                                                                                                                    747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Met-1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 375.5; DB Pred. No. 4e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Met-11,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -CEKTFIQSSDLVKHLVVHNGENPPAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Met-16,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Met-38,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HGGSPAYQCDHPGCFKN 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1350;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or Met-39
                                                                                                                                                            PID: 9488833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81;
                                                                                                                                                                                                                                                           t-complex region
                                                                                                                 ij
                                                                                                                 the mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ъ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                 embryon:
                                                                                                                                                                                                                                                             o
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
      밁
                            Š
                                                                    В
                                                                                               Ś
                                                                                                                                В
                                                                                                                                                           Ś
                                                                                                                                                                                              밁
                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  φ
```

protein ZNF41 - human (fragment)

```
A;Gene: Zfp-51
C;Superfamily: z
C;Keywords: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                  483
                                                                                                                                                                                                                               425
                                                                                                                                                                                                                                                                                                         367
584
                                  320
                                                                                                              260
                                                                                                                                                                                         200
                                                                                                                                                                                                                                                                   142
                                                                                                                                                                                                                                                                                                                                              85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                104;
                                                                          Gi-
                                                                                                            LIKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEEDSLDEKRSDVRSDSMSAQR
                                                                                                                                                                                         PKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHDGNIPDD
                                                                                                                                                                                                                                                                   CKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IKQSHPKLKC 199
                                                                                                                                                                                                                                                                                                       YKCRECDKSFIHSSHLRRHQNVHTGERPYRC--KECDKSFHESATLREHEKSHTGEKTYK 424
                                                                                                                                                                                                                                                                                                                                            FHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLRHHILS-VHEKTLT 141
                                                                                                                                                                                                                                                                                                                                                                                    YEC--KECGKSFIELSHLKRHYRIHTGEKPYKCEI--CDKSFTTTTTLKTHQKIHTGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                      YICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEKKP
Ä
                                  SIKSFTASLEGSKSVSKLISNSGKK-INCPKNNCDRMFSREYDLRRHLKWH 369
                                                                                                                                                    IECGKSFTNNSYLRTHQKVHSGE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     zinc finger protein ZFP-36; LIM metal-binding A binding; zinc finger
                                                                                                                                                                                                                               CRECDKSFTQRAYLRNHHNRVHTGERPYECKE--CGKSFTTCSTLRIHQTIHTGKKPYKC
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                        -ECDKSFTQVSHLRTHQRVHTGERPFRCTECD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 374.5; DB 2;
Pred. No. 2.3e-15;
54; Mismatches 140;
HSGEKPYKC--RDCDISFSQISNLRRHQKLH
                                                                                                                                                       -KPYRCKECD-KSFTSCSTLKAHQSI-HTGEKPYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat
                                                                              KSFIRSSHLREHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                53;
  614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                              583
                                                                                                                                                                                                                                                                                                                                                                                        366
                                                                                                                                                                                                                                                                                                                                                                                                                            84
                                                                                                                  319
                                                                                                                                                                                                                                   482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15
```

A;Gene: GDB:ZNF41
A;Cross-references: GDB:125865; OMIM:314995
A;Map position: Xp11.3-Xp11.23
C;Superfamily: zinc finger protein ZFP-36; LIM metal-binding zinc finger protein ZNF41 - human (trag C;Species: Homo sapiens (man) C;Date: 02-Jun-1995 #sequence revision C;Accession: A54661; I54227 A;Molecule type: DNA A;Residues: 1-542 <FRA> A;Cross-references: GB: C;Genetics: R;Franze, A.; Archiutacum Conomics 9, 728-736, 1991 A; Reference number: A54661; A; Accession: A54661 A;Title: Isolation and expression analysis of a human zinc A;Reference number: A54661; MUID:91244317; PMID:2037297 A;Status: preliminary Query Match Local Similarity les 115; Conser GDB: ZNF41 329 186 163 74 14 Archidiacono, N.; THIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLRHH ISSSSSRPKKYICTYEGCDKAYNRDSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLE LKIH-QKSHIGERHYECKDCGKAFIQKSTLSVHQRIH--LQFHIKQSH---PKLKCFKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKK -LTTHQKTHTGEKPYMCAECGKAFTDQSNLIKHQKTHTGEKP-YKCN--GCGKAFIWKSR ILSVHEKTLT-----THORIHTGEKPYECSDCGKSFTKKSQLHVHQRIHTGEKPYICT--ECGKVFTHRTN----IHQKTHTGEKHYEC--NECGKAFTRKSALRMHQRIHTGEKPYVCA--DCGKAFIQKSHFN Conservative GB:M36548; GB:M92443; NID:g340443; PIDN:AAA61312.1; PID:g340444 16.7%; CKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSV Rocchi, 59; Score 373; DB Pred. No. 2.1e-59; Mismatches 02-Jun-1995 **∡** Marino, 2.1e-15 DB 2; 156; #text_change Σ. Length 542 Indels Grimaldi, finger repeat 66; 01-Dec gene വ GKAFIQK homology Gaps (ZNF41) 185 131 218 73 241 272 382 328 located

```
RESULT 11
JN0533
finger protein |
C;Species: Mus r
                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          finger protein 2, placental - human (7.5pecies: Homo sapiens (man) (7.5pecies: Homo sapiens (man) (7.5pecies: Homo sapiens (man) (7.5pecies: Bomo sapiens (
                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GB:M27878
C;Superfamily: zinc finger protein ZFP-36; LIM metal-binding repeat
C;Keywords: tandem repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1-651 <BEL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: The human genome contains hundreds of genes coding A;Reference number: A32891; MUID:89377476; PMID:2505992 A;Accession: B32891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                   553
                                                                                                                                                                                                                                                                                                                                                                                                                                461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                   YDLRRHLKWHDDNLQRIESFLNSIEKEETPEGEPLVKKARMDLLPNE
                                                                                                                                                                                                                                                                                                                                                 DSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKK-INCPKNNCDRMFSRE
musculus
                                                                                                                                                                                                                                                                                                                                                                                                                      CGKAFGEKSSLATHORTHTGEKPYECRDCEKAFSOKSQLNT-HQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KAFSEKLSLTNHQRIH---TGEKPYVCSEC--GKAFCQKSHLISHQRT-HTGEKPYECSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNIFHDGNIFDDLL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QCGKAFSQKSHLISHQMTHTGEKPFICSKCGKAFSRKSQLVRH-QRTHTGEKPYECSECG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CS--DCRKAFFEKSELIKHQTIHTGEKPYECSECRKAFRERSSLINHQRTHTGEKPHGCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTFENCQEAFY-KHQSLRHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KPYGCNECGRAFSEKSNLINHQRIHTGEKPFECRECGKAFSRKSQLVTHHRTHTGTKPFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KPYNCSQ--CGKAFSQKSQLTSHQRTHTGEKPYEC--GECGKAFSRKSHLISHWRTHTGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MHQIIHTGKKPYAC--TECOKAFTDRSNLIKHQKMH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VSKLISNSGKKINCPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LITHQKIHTREKPYECGDCGKTFTWKSRLNIHQKSHTGERHYECSKCGKAFIQ--KATLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SHFIAHHRI-HTGEKPYECSDCGKCFTKKSQL-RVHQKTHTGEKPNICAECGKAFTDRSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -LETEKLKVEEDEEDS----LDEKRSDVRSDSMSAQRSI-----KSFTASLEGSKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NELVEHYNI FHDGNI PDD------LLKETEVKKLENLLDQGSKLNNLHE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----SEK----KPFHCSVCGKGVNSRQHLKRHEITH--TKSFK
                                  mouse
   (house
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---AYQCDHPG----CFKNFQTWSVLQFHIKQSHPKLK---CPKCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16.7%;
27.4%;
                                                                                                                                                                             -QRIHTGEKPFECSEC--GKAFSRKSH--LIPHQ
   mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 373; DB 2;
Pred. No. 2.6e-15;
57; Mismatches 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEE
                                                                                                                                                                                                                                                                                               -AFFEKSELIRHLRTHTGEKPYEC--NECRKAFREK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 651;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for finger proteins of
                                                                                                                                                                          587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      136;
                                                                                                                                                                                                                                                                                                                                                                                                                   -RIHTGEKPYE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                          359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Martial,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
```

```
N;Alternate names: TFIIIA
C;Species: Homo sapiens (ma
C;Date: 21-Dec-1996 #sequen
C;Accession: G01496
R;Becker, K.G.
                                                                     A; Map position:
C; Superfamily:
                                                                                    A,Gene: GDB:GTF3A, TFIIIA
A,Cross-references: GDB:434744,
A,Map position: 13q12.3-13q13.1
                                                                                                                                                        A;Status: preliminary; translated
A;Molecule type: mRNA
A;Residues: 1-338 <BEC>
A;Cross-references: EMBL:U14134; N
                                                                                                                                                                                                                                 A; Reference number: A; Accession: G01496
                                                                                                                                                                                                                                                  submitted to the EMBL Data A; Reference number: G07520
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Date: 31-Dec-1993 #sequence_revision 31-Dec. QAccession: JN0533 R;Brady, J.P.; Piatigorsky, J. Gene 124, 207-214, 1993 A;Title: Cloning and characterization of a A;Reference number: JN0533; MUID:93185925; A;Accession: JN0533;
                                                                                                                                                                                                                                                                                                                                                                         transcription factor IIIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Experimental source: eye lens C;Superfamily: zinc finger protein ZFP-36; LIM C;Keywords: DNA binding; eye lens; zinc finger F;1-62/Region: acidic F;63-391/Region: zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: mRNA
A;Residues: 1-393 <BRA>
A;Cross-references: GB:M98502; NID:g200406; PIDN:AAA39949.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
   Query Match
Best Local S
Matches 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993;Accession: JN0533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
   89; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLIS----NSGKK-INCPKNNCDRMFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IQHQRTHTGERPYDCNECGKSFGRSSHLIQHQTIHTGEKPHKCT--ECAKASAASPHLIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               RSSALIKHKRVHTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REYDLRRHLKWHDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IKHQRTHTGEKPYECVQCGKGFTQS---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YRVHTGERPYKCDECGKNFSQNSDLVRHRRAH---TGEKPYHCNECG-ENFSRISHLVQH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FHIKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEH 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWS--VLQ 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LVHKEAHAGIRYHICSQ--CGKAFSQISDLNRHQKTHTGDRPYKCY--ECGKGFSRSSHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LISSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDE-----EDEEDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HQRTHSGEKPYECEECGKSFSRSSHLAQHQRTHTGEKP-YECHE--CGRGFSERSDLIKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL-R 129
                                                                       transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                #sequence_revision 06-Jun-1997 #text_change 05-Nov-1999
                16.4%;
29.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16.7%;
                                                                                                                                                                                                                                                                 Library,
                                                                                                                                                                                                                                                                                                                                                                         human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KPYECTACGKSFSRSSHLITHQKIHTGEKPYECNECWRSFGERSDL
                                                                       factor IIIA
                                                                                                      OMIM: 600860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57;
                                                                                                                                                      NID:g551534; PIDN:AAA21873.1; PID:g551535
Score 364.5; DB 2;
Pred. No. 4.1e-15;
9; Mismatches 102;
                                                                                                                                                                                                               from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 372; DB 2;
Pred. No. 1.7e-15;
7; Mismatches 163
                                                                                                                                                                                                                                                                                                                                                                       (fragment)
                                                                                                                                                                                                                                                                 August 1994
                                                                                                                                                                                                               GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         novel zinc-finger
PMID:8444344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -SNLITHORVHTGEKPYEC--TECDKSFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                metal-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #text_change 01-Dec-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PID:g200407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
```

Conservative

49;

Indels

67;

Gaps

11;

```
RESULT 13
A32891
finger protein 1, placental - human
finger protein sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 20-Oct-1989 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:M27877
C;Superfamily: zinc finger pr
C;Keywords: tandem repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ϋ́O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γŞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                          밁
                                                    8
                                                                                    g
                                                                                                           Ş
                                                                                                                                        당
                                                                                                                                                                   8
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-428 < BEL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Title: The human genome contains hundreds of genes co A; Reference number: A32891; MUID:89377476; PMID:2505992 A; Accession: A32891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Bellefroid, E.J.; Lecocq, P.J.; Benhida, DNA 8, 377-387, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Accession: A32891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                        Росат
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         108
331
                            325
                                                        304
                                                                                    265
                                                                                                                 258
                                                                                                                                          211
                                                                                                                                                                        207
                                                                                                                                                                                                  154
                                                                                                                                                                                                                             149
                                                                                                                                                                                                                                                                                                                                                                        116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              54
                                                                                                                                                                                                                                                           96
                                                                                                                                                                                                                                                                                    92
                                                                                                                                                                                                                                                                                                                38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FHDGNIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFHIKQSHPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TKSFKCTFENCQEAFYKHQSLR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PYKCTVDDCDKAFFRKSHLETHIVSHSEKKPFHCSV--CGKGVNSRQHLKRH-EITH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ESVSSLTIADAFIAAGESSAPTPPRPALPRRFICSFPDCSANYSKAWKLDAHLCKHTGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KSISSL----ISSSSSSR------PKKYICTYEGCDKAYNRPSLLEQHLRTHSNDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SRPFVCEHAGCGKTFAMKQSLTRHAVVHDPDKKKMKL-----KVKKSREKRSLASHLS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LK---CPK--CGKGCVGKKGLSSHMLSHD-DSTMIKIWTCDYCDVGKFAKKNELVEHYNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QKQYICSFEDCKKTFKKHQQLKIHQCQHTNEPLFKLCCQKGCSFVAKTWTELLKHVRETH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PFVCDYEGCGKAFIRDYHLSRHILTHTGEKPFVCAANGCDQKFNTKSNLKKHFERKHENQ 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEEILCEVCRKTFKRKDYLKOHMKTHAPERDVCRCPREGCGRTYTTVFNLQSHILSFHEE
                                                                                                                                             SHKSSLVNHWRIH---TGEKPYKCNEC--GKVFSHKSSLVNHWRI-HTGEKPYKCNECGK
                                                                                                                                                                                                                                                                                                                                             CDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEKKPFHCSVCG
SKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLKWH 369
                            NSYLAYHWRIHTGEKAYKCNECGKVFGLNSSLAHHRKIHTGEKPFKCNECGKAF--SMRS
                                                                                    VFSRNSYLAQHLI IHAGEKPYKCDECDKAFSQNSHLVQHHRIHTGEKPYKCDECGKVFSQ
                                                                                                                                                                        VGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNIFHDGNIP-----
                                                                                                                                                                                                  FSRNSYLVQHLIIHTGEKP-YRCN--VCGKVFHHISHLAQHQRIHTGEKPYKCNECGKVF
                                                                                                                                                                                                                             FTRPSKLAOHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IKQSHPKLKCPKCGKGC
                                                                                                                                                                                                                                                         KVFNQISHLAQHQRIHTGEKPYKC--NECGKVFHQISHLAQHRTIHTGEKPYECNKCGKV
                                                                                                                                                                                                                                                                                    KGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL-RHHILSVHEKTLTCKQCNKV
                                                                                                                                                                                                                                                                                                               CGKIFNKKSNLASHORIHTGEKPYKC--NECGKVFHNMSHLAQHRRIHTGEKPYKCNECG
                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    257
                                                                                                                 -DDLL----KETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEEDSL
                                                                                                                                                                                                                                                                                                                                                                                      16.3%;
29.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                         50;
                                                                                                                                                                                                                                                                                                                                                                                     Score 364; DB 2;
Pred. No. 5.7e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                               ZFP-36; LIM metal-binding repeat
                                                                                                                                                                                                                                                                                                                                                                         Mismatches 155;
                                                          -SDSMSAQRSI-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Α.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              genes coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Poncelet,
                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D.A.; Belayew,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for finger proteins of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-Dec-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --HHILSVH
                                                          KSFTASLEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 107
                                                                                       324
                                                                                                                    303
                                                                                                                                                                                                     210
                                                                                                                                                                                                                                206
                                                                                                                                                                                                                                                            153
                                                                                                                                                                                                                                                                                       148
                                                                                                                                                                                                                                                                                                                   95
                                                                                                                                                                                                                                                                                                                                              91
                                                                                                                                              264
                                                                                                                                                                         257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Martial,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          묽
                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                A; Molecule type: mRNA
A; Residues: 1-427 < KAT>
                                           A;Reference number: A35659;
A;Accession: A35659
A;Status: preliminary
                                                                                      R;Kato, N.; Shimotohno, K.; VanLeeuwen, D.; Cohen, Mol. Cell. Biol. 10, 4401-4405, 1990
A;Title: Human proviral mRNAs down regulated in ch
                                                                                                                                 C; Accession: A35659
                                                                                                                                              C;Species: Homo sapiens (man)
C;Date: 28-Sep-1990 #sequence_revision 18-Nov-1992
                                                                                                                                                                           krueppel-related protein H-plk - human
  A; Cross-references: GB:M55422;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              185
                                                                                                                                                                                                                                                                                                                                  307
                                                                                                                                                                                                                                                                                                                                                               412
                                                                                                                                                                                                                                                                                                                                                                                           247
                                                                                                                                                                                                                                                                                                                                                                                                                       359
                                                                                                                                                                                                                                                                                                                                                                                                                                                  191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     128
                                                                                                                                                                                                                                                521
                                                                                                                                                                                                                                                                                                        465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11
```

```
A; Molecule type: mRNA
A; Residues: 1-615 < NIE>
C; Superfamily: zinc finc
C; Keywords: DNA binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Reference number: S05632; MUID:90040698; A;Accession: S06546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 finger protein (clone XlcOF7.1) - African clawed frog (fragment)
C;Species: Xenopus laevis (African clawed frog)
C;Date: 28-Feb-1990 #sequence_revision 28-Feb-1990 #text_change 01-Dec-2000
C;Accession: S06546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Nietfeld, W.; El-Baradi, T.; Mentzel, J. Mol. Biol. 208, 639-659, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Status: not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Title: Second-order repeats in Xenopus laevis finger proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA binding;
                                                                                                                                                                                                                                                                                                                                                                                                  HILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                              {\tt ARHQMIHTGEKPFCCSECGKCFSSSSGLTAHQQRTHMKVKPFSCSACGKCFSNRSHLIRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HFAHHOMIHTGEKPFCCSKCGKCFASSSDLTFHRRTHTREKTFSCS--ECGKCFSNHSHL 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSLVHHQRTHIGEKPFCCSE-CDKCFASSSELNIHQRTHTGEKPFSCS--ECGKCFTNHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSLISSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SLTNHHAIHTGEKHFKC--NECGKLFRDNSYLVRHQRFH 419
                                                                                                                                                                                                                                                                           HRTHTGEKPFSCSECGK-CYSKKSSLVHHQRTHTGEKPFSCSKCDKC----FASSSEL--
                                                                                                                                                                                                                                                                                                                                                                       QMIHTGEKPFSCFECRKCFSNPSNLARHQMTHTGEKP-FSCSE--CGKCFASSSDLTFH-
QSSLARHQMTH
                                           EYDLRRHLKWH
                                                                                                                                    RSDVRSDSMSAQRSIKSFTASLEGSKSVS-----KLISNSGKKINCPKNNCDRMFSR
                                                                                                                                                                                  --NIHQRTHTGEKAFSCSECGKCFTNRSQLSRHQMIHTGE-KPISCPECEECFVSS----
                                                                                                                                                                                                                                HYNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDBEDEEDSLDEK
                                                                                                                                                                                                                                                                                                                       KQSHPKLK---CPKCGKGCVGKK-GLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVE
                                                                                    -SQLTAHQQQAHRMVKPFSC-LECGKCFSNRSNFARHQMIHTGEKPFSC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein ZFP-36; LIM metal-binding repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 363.5; DB 2;
Pred. No. 9.1e-15;
B; Mismatches 165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H.; Pieler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PMID:2509712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Koester,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                              -SECRKGFSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Poeting,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184
                                                                                                                                           358
                                                                                                                                                                                                                                                                                                                                                                                                                          190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70
                                                                                                520
                                                                                                                                                                                                                                       306
                                                                                                                                                                                                                                                                                   411
                                                                                                                                                                                                                                                                                                                                246
                                                                                                                                                                                         464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     130
                                                                                                                                                                                                                                                                                                                                                                              358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Α.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Knoech
```

As down regulated in choriocarcinoma MUID:90318410; PMID:2115127

encode

a zinc finger pr

#text

_change

01-Dec-2000

NID:g184342;

PIDN: AAA36010.1;

PID:g184343

```
Search completed: July 22, 2004, 16:47:55 Job time : 23 secs
                                                                                   Ş
                                                           뭐
                                                                                                              Вþ
                                                                                                                                    Ś
                                                                                                                                                               DЬ
                                                                                                                                                                                             Ş
                                                                                                                                                                                                                    유정
                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Superfamily: zinc finger protein ZFP-36; LIM metal-binding repeat homology
                                                                                                                                                                                                                                                                                                                                                                                         Query Match
16.1%; Score 359.5; DB 2; Length 427;
Best Local Similarity 32.0%; Pred. No. 1.1e-14;
Matches 99; Conservative 36; Mismatches 121; Indels 53; Gaps 13;
                                                     413 GEKLYKCEE 421
                                                                                                     361 YKĆGEĆ--ĠKAFNQSSALNTHKÌIHTĠENPHKCRESGKVFHL-----SŚKLSTCKKIHT 412
                                                                                                                                                            288 -EKL-KVEE 294
                                                                                                                       228 WTCDYCDVGKFAKKNELVEHYNIFHDGNIFDDLLKETEVKKLENLLDQGSKLNNLHELET 287
                                                                                                                                                                                                                              246
                                                                                                                                                                                                                                        137 EKTLTCKQCNKVFTRPSKLAQHKLKH------HGGSPAY 169
                                                                                                                                                                                                                                                                            188 TEEKPYKCEECGKAFNQSSTLTTHNIIHTGEIPYKC--EKCVRAFNQASKLTEHKLIHTG 245
                                                                                                                                                                                                                                                                                                                                   80 SEKKPFHCSVCGKGVNSRQHLKRHEITHTKS--FKCTFENCQEAFYKHQSL-RHHILSVH 136
                                                                                                                                                                                                                     EKRYECEECGKAFNRSSKLTEHKYIHTGEKLYKCEECGKAFNOSSTLTTHKRIHSGEKPY 305
```

This Page Blank (uspto)

•

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein -
                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB seq length: 0
DB seq length: 2000000000
         495
490
393.5
396.5
396.5
397.5
387.5
387.5
387.5
387.6
376.6
375.6
376.3
373.3
373.3
373.3
373.3
377.5
360.5
360.5
360.5
350.5
354.3
354.3
355.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSESDETKSISSLISSSSSS...........PLVKKARMDLLPNETSVISR 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      July 22, 2004, 16:42:55 ; Search time 13 Seconds (without alignments) 1650.223 Million cell updates/sec
            237.6
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
177.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                141681 seqs, 52070155 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-831-804-3
2229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SwissProt_42:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd
         DB
  TF3A_YEAST
TF3A_SCHPO
ZN43 HUMAN
Z492 HUMAN
TF3A HUMAN
ZN93 HUMAN
ZN93 HUMAN
ZN93 HUMAN
ZN93 HUMAN
ZN94 HUMAN
ZN94 HUMAN
ZN94 HUMAN
Z441 HUMAN
Z440 HUMAN
Z446 HUMAN
Z446 HUMAN
Z446 HUMAN
ZN84 HUMAN
ZN84 HUMAN
ZN84 HUMAN
ZN84 HUMAN
ZN84 HUMAN
ZN84 HUMAN
ZN84 HUMAN
ZN84 HUMAN
ZN84 HUMAN
ZN84 HUMAN
ZN94 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN
ZN95 HUMAN

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
917038 homo sapien
O99264 homo sapien
O92664 homo sapien
O92664 homo sapien
O92664 homo sapien
O95481 homo sapien
O95481 homo sapien
O95481 homo sapien
O96481 homo sapien
O94673 homo sapien
O99676 homo sapien
O99676 homo sapien
O99671 homo sapien
P51523 homo sapien
P51523 homo sapien
P51523 homo sapien
P51523 homo sapien
P51523 homo sapien
P51523 homo sapien
P51524 homo sapien
O90671 homo sapien
O90671 homo sapien
O9071 homo sapien
O9071 homo sapien
O9071 homo sapien
O9071 homo sapien
O91345 homo sapien
O43459 homo sapien
O44591 homo sapien
O44591 homo sapien
O14598 homo sapien
O14598 homo sapien
O14598 homo sapien
O14598 homo sapien
O14598 homo sapien
O14598 homo sapien
O14598 homo sapien
O15928 homo sapien
O15928 homo sapien
  Q9uju3
Q9u6976
Q99676
Q99676
Q907291
Q907291
Q907330
P511523
P511523
P511523
P511523
P511523
Q9hcg1
Q9hcg1
Q9hcg1
Q9hcg1
Q9hgx1
Q9ngx1
Qynqx1
Qynqx1
Qynqx1
Qynqx1
Qynqx1
Qynqx1
Qynqx1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P39933
Q9ut15
P17038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              saccharomyc
schizosacch
```

CCCCCRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR	TES AC AC	
01-FEB 10-OCT Transc 17-C2 O Saccha Eukary Saccha NCBI T [1] SEQUEN MEDLIN Archam Archam Archam Medilin Moychii "Genes comeon cerevi "Genes comeon cerevi [3] SEQUEN MEDLIN MOYCHI "Genes comeon cerevi "Genes comeon cerevi "Genes comeon cerevi "Genes comeon cerevi "The na Nature Peter Vareste Walsh Ari Directe Walsh Medile Peter Chung I Dietri Duncan Hall J Merste Komp C Marath Muelle Peter Chung I Schere Chung I Schere Chung I App	RESULT 1 TF3A YEA ID TF3 AC P39 DT 01-	00000004444444444400000000000000000000
pre-1995 DCT-2003 SECTIPE: DATE OF PRE- PROPERSON OF PRE- PROPERSON OF PRE- INE-921 INE-921 INE-921 INE-921 INE-922 INCE FRE- INE-928	1 'AST '3A_YEAST 9933; -FEB-1995	33 3444 444 3444 344 344 35 344 34 35 35 36 36 36 36 36 36 36 36 36 36 36 36 36
-1995 (Rel. 31, Lat2003 (Rel. 42, Lat- ription factor III) Rel. 42, Lat- ription factor IIIIA OF romyces cerevisiae ota; Fungi; Ascomy, remycetales; Sacch axII-4932; CE FROM N.A. E=92147684; PubMed- Dault J., Milne C.J. J.; Milne C.J. J.; Milne C.J. J.; Milne C.J. J.; Milne C.J. J.; Milne C.J. J.; Milne C.J. J.; FROM N.A. E=9218768 N.A. E=PROM N.A. Subunit RPB6 are dispersion of transcription	STAI	15.7 15.7 15.6 15.6 15.6 15.6 15.6 15.6
el. 31, Last seel. 42, Last affactor IIIA (T) R TFIIA (T) R	NDARD;	670 1 439 1 466 1 606 1 602 1 602 1 102 1 623 1 643 1
Last sequence upday IIIA (FFIIIA). IA OR YPR186C OR P90 Siae (Baker's yeast) COMYCOTA, Saccharomycota, Saccha	PRT	ZN1 Z22 ZN7 ZO2 ZN2 ZN2 Z19 ZF6 Z22 Z19 Z19 Z15 Z17 ZN2
pr upda ion up pr peg present x. pripti trensi trensi trensi trensi trensi trensi trensi trensi trensi trensi trensi trensi	r; 429	6 HUMAN 5 HUMAN 1 HUMAN 8 XENLA 8 XENLA 6 HUMAN 6 HUMAN 7 HUMAN 7 HUMAN 7 HUMAN 7 HUMAN 5 HUMAN 5 HUMAN 5 HUMAN 1 HUMA
and arc live ed ar	AA.	ω
yces yces yces B., T.T. genc, genc, B., F., Bert, Bert, Bert, Chin I C. Solar REG SS, I Herrary		
riese from from from charo cha		P17020 Q9uk10 Q9nqx8 P18747 P17030 Q9u159 P16174 Q9u613 Q14709 D34695 P17027
s; D., Opus opus opus se es se es se es opus opus ALSO		hom hom hom hom hom hom hom hom hom
		o sapien o sapien o sapien o sapien opus lae o sapien musculu o sapien o sapien o sapien o sapien o sapien o sapien o sapien o sapien o sapien o sapien

```
Ş
                                                                                                                                  Ş
                                                                                                                                                              맑
                                                                                                                                                                                     Ş
                                                                                                                                                                                                                  뭥
                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                  Š
                        8
                                                     В
                                                                                                          뮍
밁
                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for commer entities requires a license agreement (See http://www.isb-sib.ch/annou or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN

ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGD; S0006390; PZF1.
GG; GG:0005667; C:transcription factor complex; IPI.
GG; GG:0003709; F:RNA polymerase III transcription factor act. . .; IPI.
GG; GG:0006384; P:transcription initiation from Pol III promoter; IPI.
InterPro; IPR007087; Znf C2H2.
Pfam; PF00096; Zf-C2H2; 9.
SMART; SM00355; Znf C2H2; 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR; S20050; S20050.
GermOnline; 144451; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; M90638; -; NOT ANNOTAT EMBL; U25841; AAB64615.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00028; ZINC_FINGER_C2H2
PROSITE; PS50157; ZINC_FINGER_C2H2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M80611; AAB08014.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RNA-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transcription regulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSFAC;
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUBCELLULAR LOCATION: Nuclear.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                     141
 373
                          353
                                                     313
                                                                               294
                                                                                                           261
                                                                                                                                                               201
                                                                                                                                                                                         176
                                                                                                                                                                                                                                               118
                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                          --DKCAKSFVKKSHLERHLYTHSDTKPPQCSYCGKGVTTRQQLKRHEVTHTKSFICPEEG
                                                                                                                                                                                                                                                                                                                                                       MSESDETKSISSLIS--SSSSSRPKKYICTYEGCDKAYNRPSLLEQH-LRTHSNDRPYKC
                                                                                                                           GKFAKKNELVEHYNIFH-DGNIFDDL-LKETEVKKLENLLDQGSKLNNLHELETEKLKVE
                                                                                                                                                                                                                                             CQEAFYKHQSLRHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGG--SPAYQCDHPG
                                                                                                                                                                                                                                                                                          TVDDCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFEN 117
  SRTFKTKEKYEKHIDKHKVHELKLKILQ----
                          DRMFSREYDLRRHL---KWHDDNLQRIESFLNSIEKEE
                                                                             EDEEDEEDSLDEKRSDVRSDSMSAQRSIKSFTASLE-GSKSVSKLISNSGKKINCPKNNC
                                                                                                            MSFSRKHDLLTHYGSIHTEEDIPLELKYKISDIQQL--VQDHGVQLGN
                                                                                                                                                               CCKEFRIWSQLQSHIKNDHPKLKCPICSKPCVGENGLQMHMIHDDSLVTKNWKCHICPD
                                                                                                                                                                                         CFKNFQTWSVLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDV
                                                                                                                                                                                                                     CNLRFYKHPQLRAHILSVHLHKLTCPHCNKSFQRPYRLRNHISKHHDPEVENPYQCTFAG
                                                                                                                                                                                                                                                                                                                              ISRSESSESLINSITSTRSSSSNRPKTYFCDYDGCDKAFTRPSILTEHQLSVHQGLRAFQC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T03530;
                                                     QDEEKI SNRLRKRRKLTENNNVEFLQNEVDLEKRLESGENGLNLLLNTVGRKYRCFYNNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Repeat; 4 49 10 10 10 13 1134 115 1194 21 22 22 25 321 3;
                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74
102
130
159
186
219
244
277
327
                                                                                                                                                                                                                                                                                                                                                                                                                                        50027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANNOTATED_CDS.
                                                                                                                                                                                                                                                                                                                                                                                                37.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                        , WM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zinc-finger; Metal-binding; DNA-binding;
                                                                                                                                                                                                                                                                                                                                                                                    62; Mismatches 135; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SER-RICH.
                                                                                                                                                                                                                                                                                                                                                                                               Score 837.5;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ARG/LYS-RICH
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                        209B1EDEA20422D9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; 8.
2; 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                .3e-42;
                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
    EKEE 404
                               387
                                                                                                                                                                                                                                                                                                                                                                                                             Length 429;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a collaboration
                                                                                                                                                                                                                                                                                                                                                                                     27;
                                                                                                               ---SKHSNE
                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  commercia.
                                                                                                                                          293
                                                                                                                                                                     260
                                                                                                                                                                                                                        200
                                                                                                                                                                                                                                                                                                                                 82
                                                                                                               312
```

```
TRASULT 2
TF3A S
TF3A S
AC Q9UTL5
AC Q9UTL5
AC Q9UTL5
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 28-FEB
DT 10-OCT
Transc
GN SCRLIX
OC SCRLIZO
OC SCRLIZO
OC NCDI TRAN
RA SEQUEN
RA MEDLIN
RA SCRUIN
RA SCRUIN
RA SCRUIN
RA SCRUIN
RA SQOURC
RA WEDLIN
RA Gabell
RA Gabell
RA Gabell
RA Goffee
RA Goffee
RA Gentle
RA Gentle
RA Gentle
RA Goffee
RA Gentle
RA Gentle
RA Goffee
RA Gentle
RA Gentle
RA Goffee
RA Gentle
RA Gentle
RA Gentle
RA Goffee
RA Gentle
RA Gentle
RA Goffee
RA Gentle
RA Gentle
RA Goffee
RA Gentle
RA Goffee
RA Gentle
RA Goffee
RA Gentle

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RA WOODLY U, Gwilliam R., Rajandream M.A., Lyne M., Lyne R., Stewart A., RA WOODLY U, Gwilliam R., Rajandream M.A., Lyne M., Lyne R., Bowman S., RA Syourds J., Peat N., Hayles J., Baker S., Basham D., Bowman S., RA Brooks K., Brown D., Brown S., Chillingworth T., Churcher C.M., RA Brooks K., Brown D., Brown S., Chillingworth T., Fraser A., RA Gollins M., Connor R., Cronin A., Davis P., Feltwell T., Fraser A., RA Gollins M., Connor R., Cronin A., Davis P., Feltwell T., Fraser A., RA Gollins M., Goble A., Hamlin N., Harris D., Hidalgo J., Hodgson G., RA Gollins M., Jones M., Leather S., McDonald S., McLean J., Hamlin N., Harris D., Hidalgo J., Hodgson G., RA James K., Jones L., Jones M., Leather S., McDonald S., McLean J., Wall S., McLean J., Niblett D., Odell C., RA James K., Jones N., Leather S., McDonald S., Kolean J., Simmonds M., Squares R., Squares S., Stevens K., RA Goliver K., O'Neil S., Pearson D., Quail M.A., Rabbinowitsch E., RA Waltherford K., Rutter S., Squares R., Walth S.V., Warren T., Whitehead S., RA Weltjens I., Volckaert G., Aert R., Robben J., Grymonprez B., RA Weltjens I., Vanstreels E., Rieger M., Schaefer M., Mueller-Auer S., RA Golfeau A., Cadieu E., Dreano S., Gloux S., Lelaure V., Mottier S., RA Goffeau A., Cadieu E., Dreano S., Gloux S., Lelaure V., Mottier S., RA Galibert F., Aves S.J., Xiang Z., Hunt C., Moore K., Hurst S. M., Bagar R., Cruzado L., Jümenez J., Sanchez M., Galzon A., Thode G., RA Daga R.R., Cruzado L., Jümenez J., Sanchez M., Gelsenito J., Forsburg S.L., RA Gernitti I., Towe T., McCombie W.R., Panlsen I., Potashkin J..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation updat
Transcription factor IIIA (Factor A) (TFIII
SFC2 OR SPAC144.09C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9UTL5;
28-FEB-2003
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cerrutti L., Lowe T., McCombie W.R., Paulsen I., P
Shpakovski G.V., Ussery D., Barrell B.G., Nurse P.
"The genome sequence of Schizosaccharomyces pombe.
Nature 415.871-880(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schizosaccharomyces pombe."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schulman D.B., Setzer D.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A., AND FUNCTION. MEDLINE=22082319; PubMed=12087160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schizosaccharomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Fungi; Ascomycota; Schizosaccharomycetes;
Schizosaccharomycetales; Schizosaccharomycetaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schizosaccharomyces pombe (Fission yeast).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=21848401; PubMed=11859360;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic Acids Res. 30:2772-2781 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Identification and characterization of transcription factor IIIA from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=4896;
                                                                                                                                                                                         EMBL; AY091590; AAM00046.1;
EMBL; AL132675; CAB59689.1;
PIR; T37676; T37676.
                                                                                                                                                                                                                                                                                                                                   entities requires a license agreement (S
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                         use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                            or send an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      transcription of the 5S ribosomal RNA gene. SUBCELLULAR LOCATION: Nuclear (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         European
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RNA polymerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: Is required for correct transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SCHPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                              P07248; 1ARD
                                                                                                                                                                                                                                                                                                                                                                                                                                 Bioinformatics Institute. The profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      quired for correct transcription of 58 RNA genes by III. Also binds the transcribed 58 RNA's. Initiates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n update)
(TFIIIA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               374
                                                                                                                                                                                                                                                                                                                                                                        (See
                                                                                                                                                                                                                                                                                                                                                                                                                           There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                     http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pombe.";
                                                                                                                                                                                                                                                                                                                                                                                                Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Potashkin
                                                                                                                                                                                                                                                                                                                                                                                                      уď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   restrictions on
                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a collaboration
MBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                            no
```

GenebB Spombe; SPAC144.09c; -.
InterPro; IPR007087; Znf C2H2.
Pfam; PF000096; zf-C2H2; 10.
ProDom; PD000003; Znf_C2H2; 1.

ProDom; PD000003; Znf_C2H2; SMART; SM00355; ZnF_C2H2;

```
γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                     ZN43 HUMAN

PI7038; PZ8160; Q96DG1;

P17038; PZ8160; Q96DG1;

P1701-BUC-1990 (Rel. 15, Created)

P1 01-DEC-1992 (Rel. 24, Last sequence update)

P1 10-OCT-2003 (Rel. 42, Last amotation update)

P1 10-OCT-2003 (Rel. 42, Last amotation update)

P2 Zinc finger protein 43 (Zinc protein HTF6) (Zinc)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RNA-binding;
ZN FING
ZN FING
ZN-FING
Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                           LT 3
HUMAN
  TISSUE=Lymph;
                      SEQUENCE FROM
                                                                                                                                                                                                                                    Homo sapiens (Human)
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                         Nucleic Acids
                                                                            "A gene encoding 22 highly related zinc lymphoid cell lines.";
                                                                                                                 Lovering R.,
                                                                                                                                 MEDLINE=91279444; PubMed=1711675;
                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                    NCBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Transcription
                                                                                                                                                          SSUE=T-cell,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                  TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RFKRLYDMHRHLNSH 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SSALKKHISVIHEGNMAFHCDSCGTKFGYKHMLQRHLERGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VLQFHIKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDV----GKFAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SSSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IEGVAIHDQKEKELSSNLVSDVAKKIINEVTG--HGYK----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EDEEDSLDEKRSDVRSDSMS--AQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KNELVEHYNIFHDGNIP----DDLLKETEVK-KLENLLDQGSKLNNLHELETEKLKVEEDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QLQNHIREAHVP-SCSICGRQFKTAAHLRHHVVLH--QTTLEERKTYHCPMEGCKKSFTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HISACHTHLLPYPCTYQDCELRFATKQKLQNHVNRAHEKIISYSCPHESCVGHEGFEKWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HILSVHEKTL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HIVSHSEKKPFHCSV--CGKGVNSRQHLKRHEITH--TKSFKCTFENCQEAFYKHQSLRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SKNLRSAKKIFHCPYEECGKKYSRPSLLEQHLRTHSNERPFVCDYTGCSKAFYRKSHLKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HKRCHTNVKPFSCHYDGCDAQFYTQQHLERHIEVHRKPKPYACTWEGCDECFSKHQQLRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PS50157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS00028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Repeat; 4 23 1 1 13 1 1 1 20 4 2 2 3 4 9 2 3 4 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               374 AA;
                                                                                                             Trowsdale J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                         Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  regulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZINC_FINGER_C2H2_1;
ZINC_FINGER_C2H2_2;
                                                         19:2921-2927(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77
107
138
169
226
261
291
                                                                                                                                                                                                                                    Primates;
                                                                                                                                                                                                                                                     Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGC--FKNFQTWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zinc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 r protein.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 495;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                  Catarrhini;
                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -finger; Metal-binding; DNA-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7469C701FFF08FF6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ed. No. 1.6e-22;
Mismatches 160; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ဖြ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ATYPICAL).
                                                                                            fingers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DВ
                                                                                                                                                                                                                                Hominidae;
                                                                                                                                                                                                                                                                                                                                   (Zinc
                                                                                            18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 374;
                                                                                                                                                                                                                                                                                                                               finger protein
                                                                                            expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CKKAHKPYINECGIKHDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----EAREYSĊSFPEĊNY
                                                                                                                                                                                                                                  Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34;
                                                                                          Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           184
```

```
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Klausner R.D., Collins F.S., Wagner L. Shenmen C.M., Schuler G.D.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Brownstein M.J., Uddin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Robards S., McGewan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

RA Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Glibs R.A.,

RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Glibs R.A.,

RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Fahey J., Halton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

"Generation and initial analysis of more than 15,000 full-length

RT. "Generation and mouse cDNA sequences.",

Proc. Natl. Asad. Sci. U.S., A., 90.16899-1690921
InterPro; IPR001999; KRAB.
InterPro; IPR007987; Znf C2H2.
InterPro; IPR007086; Znf C2H2.
InterPro; IPR007086; Znf C2H2.
Pfam; PF001352; KRAB; 1.
Pfam; PF001352; KRAB; 1.
PRINTS; PR00048; ZINCFINGER.
ProDom; PD000003; Znf C2H2; 16.
SMART; SM00349; KRAB; 1.
SMART; SM00355; Znf C2H2; 22.
PROSITE; PS00028; ZINC_FINGER_C
                                                                                                                                                                                                                   MIM;
                                                                                                                                                                                                                                                                                      EMBL; BC006528; AAH06528.1; -.
EMBL; M61869, AAA56674.1; -.
EMBL; X52358, CAAA5584.1; -.
EMBL; X52358, CAA5584.1; -.
PIR; S26823; S26823.
                                                                                                                                                                                                                                                                                                                                                                                                use by non-profit institutions as long a modified and this statement is not removed. entities requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                                                                                                               GO; GO:0003677; F:DNA binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El the European Bioinformatics Institute. There are no rest
                                                                                                                                                                                                                                    Genew; HGNC:13109; ZNF43
                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -i- FUNCTION: May be involved in transcriptional i- SUBCELLULAR LOCATION: Nuclear (Probable), -i- TISSUE SPECIFICITY: T AND B CELL LINES. -i- SIMILARITY: BELONGS TO THE KRUEPPEL FAMILY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Multiple genes encoding zinc finger cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Lymphoid;
MEDLINE=91145339; PubMed=2288909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         subfamily of eukaryotic multifingered Proc. Natl. Acad. Sci. U.S.A. 88:3608
                                                                                                                                                                                                                                                       TRANSFAC;
                                                                                                                                                                                                                                                                           issp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Thiesen H.-J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 476-531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Martial J.A.; "The evolutionarily conserved Kruppel-associated box domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=91219421; PubMed=2023909; Bellefroid E.J., Poncelet D.A., L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 38-190 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=22388257; PubMed=12477932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FINGER PROTEINS.
SIMILARITY: Contains 1 KRAB
                                                                                                                                                                                                                       603972;
                                                                                                                                                                                                                                                                           P08048;
                                                                                                                                                                                                                                                                                                                                                                X59244; CAA41932.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                       T04986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2:363-374 (1990).
                                                                                                                                                                                                                                                                       7ZNF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FROM N.A.
                                                                                                                                         znf_C2H2.
znf_C2H2_
                                                                          16
                                                                                                                                             _sub.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88:3608-3612(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lecocq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     domains
                                                                                                                                                                                                                                                                                                                                                                                                                 (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     are
                                                                                                                                                                                                                                                                                                                                                                                                                                Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Revelant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                  γd
                                                                                                                                                                                                                                                                                                                                                                                                                                                               restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.
                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                defines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human
                                                                                                                                                                                                                                                                                                                                                                                                                                   commercia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 on
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ᄗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                way
```

KRAB; 1. ZINC_FINGER_C2H2_1;

19

```
Query Match
Best Local S
Matches 121
Z492 HUMAN STANDARD; PRT; Q9PS55; 28-FEB-2003 (Rel. 41, Created) 28-FEB-2003 (Rel. 41, Last sequence 15-MAR-2004 (Rel. 43, Last annotatio Zinc finger protein 492 (Fragment). ZNF492 OR KIAA1473.
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nuclear
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS50157; ZINC_FINGER_C2H2_2; 22.
Transcription_regulation; DNA-binding; Zinc-finger; Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                              648
                                                                                                                                                                                                                                                                                                                                                                                                                    538
                                                                                                                                                                                                                                                                                                                                                                                                                                                    177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121;
                                                                                                                                                                                                                                                                                                                294
                                                                                                                                                                                                             705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                             NCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                  VGK-FAKKNELVEHYNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVE
                                                                                                                                                                                                                                                                                                                                                                                                                    GKAFNHFSILTKHKRIHTGEKPYKCEECGKAFTQSSNLTTHKKIH---TGEKFYKCEEC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                FKNFQTWSVLQFH--IKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TÉCGÉAFSRSSNLTKHKKIHTEKKPYKC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SESDETKSISSLISSSS--SRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EECGKAFNWPSTLTKHNRIHTGEKPYKCEVCGKAFNQFSNLTTHKRIHTAEKPYKC--EE
                                                                                                                                                                                                                                                                                                                E-DEEDEEDSLDEKRSDVRSDS--MSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGKAFSRSSNLTKHKKIHIEKKPYKCEECGKAFKWSSKLTEHKITHTGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DDCDKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--
                                                                                                                                                                                                                                                                              ECGKAFKWSSTLTKHKIIHTGEKPYKCEECGKAF--KLSSTLSTHKIIHTGEKPYKCEK-
                                                                                                                                                                                                                                                                                                                                                -GKAFTQSSNLTTHKKI-HTGGKP---YKCEECGKAFNQFSTLTKHKIIH-TEEKPYKCE
                                                                                                                                                                                                             - CGKAFNRPSNLIEHKKIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17.9%;
31.9%;
                                                     Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C2H2-TYPE.
P -> S (IN
P -> S (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C2H2-TYPE.
                                                                                                                                                                                                                                               369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 1.40
3; Mismatches
                                                                                                                                                                                                             722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88C41B44DFDE2533
                                                                                                                         574
                                                     update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --EECGKAFKWSSKLTEHKLTHTGEKPYKC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.4e-16;
ches 171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (DEGENERATE).
(DEGENERATE).
(DEGENERATE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REF.
                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 803;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KSFKCTFEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -YKCEE--C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            117
                                                                                                                                                                                                                                                                                                                                                                                                                       593
                                                                                                                                                                                                                                                                                                                                                                                                                                                      234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                                                                                                                   647
                                                                                                                                                                                                                                                 Š
                                       뭐
                                                                   Ś
                                                                                                           밁
                                                                                                                                         Š
                                                                                                                                                                               Matches
                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00028; ZINC FINGER C2H2 1; 12.
PROSITE; PS00028; ZINC FINGER C2H2 2; 13.
PROSITE; PS00157; ZINC FINGER C2H2 2; 13.
PROSITE; PS50157; ZINC FINGER C2H2 2; 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
ZN_FING
ZN_FING
ZN_FING
                                                                                                                                                                                                                                                                                                                ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00349;
SMART; SM00355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PR00048; ZINCFINGER.
ProDom; PD000003; Znf_C2H2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001909;
InterPro; IPR007087;
InterPro; IPR007086;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SIMILARITY: Contains 1 KRAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Prediction of the coding sequences The complete sequences of 100 new cl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=20277482; PubMed=10819331;
Nagase T., Kikuno R., Ishikawa K.-I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF01352; KRAB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gene₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rissuE=Brain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zinc-tinger;
                                                                                                                                                                             Local Sin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: May function as a transcription SUBCELLULAR LOCATION: Nuclear (Probable). SIMILARITY: BELONGS TO THE KRUEPPEL FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  large proteins in vitro.";
Res. 7:143-150(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FINGER PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PF00096; zf-C2H2; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P07248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AB040906;
                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HGNC:23707; ZNF492
                                                                                                                                                                                             Similarity
                                                                                                           SGEKPYKC--KECGKAYNETSNLSTHKRIHTGKKPYKC--BECGKAFNRLSHLTTHKIIH
                                                                                                                               SRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLEIHIVSH
                                                                     SEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL-RHHILSVH
       EKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IKQSH
                                         TGKKPYKCEECGKAFNQSANLTTHKRIHTGEKPYKC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 :143-150(2000)
                                                                                                                                                                                                                                             520
574
                                                                                                                                                                                                                                                                                                                                                   184
212
212
240
268
296
352
352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein; Transo
Metal-binding;
                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KRAB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BAA95997.1; -.
                                                                                                                                                                                                                                                                   402
430
458
486
514
542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Znf_C2H2.
Znf_C2H2
                                                                                                                                                                                                                                                   65951
                                                                                                                                                                                                 17.9%;
30.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KRAB.
                                                                                                                                                                                                                                                   WW;
                                                                                                                                                                                 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nuclear
                                                                                                                                                                                                                                                                   C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                  Score 398;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a K.-I., Hirosawa M., Cuences of unidentified new cDNA clones from k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _sub.
                                                                                                                                                                                                                                                     482E5F1176ECA5B0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              domain.
                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             regulation; DNA-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                     (DEGENERATE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FAMILY
                                                                                                                                                                                                  DB 1;
..3e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OF C2H2-TYPE
                                              -EECGRAFSQSSTLTAHKIIHAG
                                                                                                                                                                                                                 Length 574;
                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ohara O.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          by
```

and

for

commercial

which

ZINC-

20 밁 Š 맒 Š

RESULT 4
Z492 HUMAN
ID Z492 H
AC Q9P255
DT 28-FEB
DT 28-FEB
DT 15-MAR
DE Zinc f
GN ZNF492
OS Homo s

Š 뮍 8 망 5 멂 S よ

64;

Gaps

79

136 262

320

```
RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셠
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TBIA HUMAN

TBIA HUMAN

(Q92664; Q12963; Q13097;

(Q1-NOV-1997 (Rel. 35, Created))

T 01-NOV-1997 (Rel. 35, Last sequence updated)

T 10-OCT-2003 (Rel. 42, Last annotation updated)

""=""string factor IIIA (Factor A) (Ti
                                             This SWI
between
                                                                                                                                                                                                                                                                                                                              Drew P.D., 1
Becker K.G.
    between the control of the function and the suropean Bioinformatics Institute. The use by non-profit institutions as long and this statement is not removed.
                                                                                                                                                                                              J. Biol.
                                                                                                                                                                                                                                    MEDLINE=94342241; PubMed=8063702; Moorefield B., Roeder R.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                        Fujiwara T., Takahashi E., Shin S., Naka
"Molecular cloning, characterization, ar
novel human gene (GTF3A) that is highly
transcription factor IIIA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUB=Fetal brain;
MEDLINE=95309028; PubMed=7789179;
Arakawa H., Nagase H., Hayashi N., (
Fujiwara T., Takahashi E., Shin S.,
                                                                                                                                                                                                                                                              CHARACTERIZATION.
                                                                                                                                                                                                                                                                                                   "Cloning and expression analysis of Xenopus TFIIIA.";
                                                                                                                                                                                                                                                                                                                                                          MEDLINE=95347600;
                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 61-423 FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota;
                                                                                                                                                                                                                       "Purification and
                                                                                                                    Biol. Chem. 269:20857-20865(1994).

FUNCTION: INTERACTS WITH THE INTERNAL CONTROL REGION (ICR) OF APPROXIMATELY 50 BASES WITHIN THE 5S RNA GENES, IS REQUIRED FOR CORRECT TRANSCRIPTION OF THESE GENES BY RNA POLYMERASE III. ALSO BINDS THE TRANSCRIPTION OF THE 5S RNA'S. MAY INITIATE TRANSCRIPTION OF THE 5S RIBOSOMAL RNA GENE AND MAINTAIN THE STABILITY OF TRANSCRIPTION
                                                                                   TISSUE SPECIFICITY: Ubiquitous.
                                        SWISS-PROT entry is copyright. It is produced through a collaboration en the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                       159:215-218 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     255
                                                                                                             OTHER GENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LNRHKMIHTGEKLYKPESCNNACDNIAKISKYKRNCAGEK 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LRRHLKWHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEEDSLDEKRSDVRSDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MSAQRSI--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KPYKCEECGKAFKQSSTLTTHKRIHAGE---KFYKCEVCSKA-FSRFSHLTTHKRI-HTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LSKHKVIHTGEKPYKYEECGKAFNOS--SHLTTHKMIHTGEKPYKC--EECGKAFNNSSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EKP---YKCEECGKAFNLSSQLTTHKIIHTGE-KPYKCEEC
                                                                                                                                                                                                                                                                                                                                          Nagle J.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Human)
                                                                                               LOCATION: Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                             Genet.
                                                                                                                                                                                                                      characterization
                                                                                                                                                                                                                                                                                                                                                       PubMed=7622052;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata;
                                                                                                                                                                                                                                                                                                                                      Canning
                                                                                                                                                                                                                                                                                                                                                                                                            70:235-238 (1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                         R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNLQRIESFLNSIEKEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ogawa M.,
Nakamura
on, and chr
                                                                                                                                                                                                                      0
f
                                                                                                                                                                                                                                                                                                                Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              n update)
(TFIIIA)
                                                                                                                                                                                                                                                                                                                                          Ozato
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                    human
                                                                                                                                                                                                                                                                                                                human cDNA homologous
There are no restrictions ong as its content is in oved. Usage by and for com
                                                                                                                                                                                                                                                                                                                                                                                                                                     homologous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                 chromosomal
                                                                                                                                                                                                                                                                                                                                        Κ.,
                                                                                                                                                                                                                    transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nagata
LY.;
                                                                                                                                                                                                                                                                                                                                         Biddison
                                                                                                                                                                                                                                                                                                                                                                                                                                   nai mapping
to Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Σ.
                                                                                                                                                                                                                                                                                                                                         ε
                                                                                                                                                                                                                    factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GKAFNQSST
                                                                                                                                                                                                                                                                                                                                                                                                                                                0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                 þ
                  n 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     478
```

```
RESULT
ZN85 HU
ID ZN
AC QU
DT 01
DT 10
                                                                                                                              밁
                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                  Ş
                                                                                       밁
                                                                                                     Ś
                                                                                                                                              Ś
                                                                                                                                                                    뫄
                                                                                                                                                                                                          g
                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                片
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GO; GO:0006383; P:rRNA transcript.
GO; GO:0006383; P:transcription finterpro; IPR007087; Znf C2H2.
Pfam; PF00096; zf-C2H2; 9.
SMART; SM00355; ZnF C2H2
PROSITE; Penni
                                                                                                                                                                                                                                                                                                                                                                             CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00028; ZINC_FINGER_C2H2_1; 7.
PROSITE; PS50157; ZINC_FINGER_C2H2_2; 8.
Transcription regulation; ZinG-finger; Metal-bindir RNA-binding; Repeat; Nuclear protein; Polymorphism.
                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                               VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MIM; 600860;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genew; HGNC:4662; GTF3A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRANSFAC
                                                                                       358
                                                                                                         251
                                                                                                                              302
                                                                                                                                                197
                                                                                                                                                                    247
                                                                                                                                                                                      165
                                                                                                                                                                                                          187
                                                                                                                                                                                                                                                 127
                                                                                                                                                                                                                              108
                                                                                                                                                                                                                                                                   54
                                                                                                                                                                                                                                                                                        67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U20272; AAA75623.1;
U14134; AAA21873.1;
P03001; 1TF3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D32257;
                                                                                                                                                                                                                                                                                                          œ
                                                                                                                                                                                                                                                                                                                              99;
                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                        FHDGNIPDDLLKETEVKK
                                                                                                                          DVCRCPREGCGRTYTTVFNLQSHILSFHEES---RPFVCEHAGCGKTFAMKQSLTRH-AV
                                                                                                                                                                                    GSPAYQCDHPGCFKNFQTWSVLQFHIKQSHPK---
                                                                                                                                                                                                                          TKSFKCTFENCQEAFYKHQSLR-HHILSVHEKTLTCKQ--CNKVFTRPSKLAQHKLKHHG
                                                                                                                                                                                                                                                               PYKCTVDDCDKAFFRKSHLETHIVSHSEKKPFHCSV--CGKGVNSRQHLKRH-EITH---
                                                                                       VHD--
                                                                                                                                              --LKCPK--CGKGCVGKKGLSSHMLS-HDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNI
                                                                                                                                                                                                         QKQYICSFEDCKKTFKKHQQLKIHQCQNTNEPLFKCTQEGCGKHFASPSKLKRHAKAHEG
                                                                                                                                                                                                                                              PFVCDYEGCGKAFIRDYHLSRHILTHTGEKPFVCAANGCDQKFNTKSNLKKHFERKHENQ
                                                                                                                                                                                                                                                                                     ESVSSLTIADAFIAAGESSAPTPPRPALPRRFICSFPDCSANYSKAWKLDAHLCKHTGER
                                                                                                                                                                                                                                                                                                            KSISSL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; T04953;
                                                                                                                                                                 ----YVC-QKGCSFVAKTWTELLKHVRETHKEEILCEVCRKTFKRKDYLKQHMKTHAPER
                                                                                                                                                                                                                                                                                                                                                                   214
221
223
223
378
423
                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 128
158
190
220
247
275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BAA06988.1;
                                                                                      PDKKKMKLKVKK
                                                                                                                                                                                                                                                                                                                                                            214
221
248
287
46847.
                                                                                                                                                                                                                                                                                                                                                                                                                              122
152
183
212
244
271
297
3297
359
                                                                                                                                                                                                                                                                                                                                      17.8%;
31.1%;
                                                                                                                                                                                                                                                                                                        ISSSSSR-----PKKYICTYEGCDKAYNRPSLLEQHLRTHSNDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A transcription;
                                                                                                                                                                                                                                                                                                                                                                    MW;
                                                                                                                                                                                                                                                                                                                             55;
                                                                                                                                                                                                                                                                                                                                                                 C2H2-TYPE.

V -> L (in dbsnp:7323).

/FTId=vAR 014824.

N -> H (IN REF. 2).

X -> KL (IN REF. 2). AAA21873).

MISSING (IN REF. 2; AAA21873).

SLASHLSGYI -> EFGLSSQWIY (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                               C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                       Pred.
                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C2H2-TYPE
                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   III transcription
                                                                                                                                                                                                                                                                                                                                   397.5; DB 1
No. 9.9e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pol III promoter;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ATYPICAL).
                                                                                                                                                                                                                                                                                                                             95;
                                                                                                                                                                                                                                                                                                                                               1:
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   factor act.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA-binding;
                                                                                                                                                                                                                                                                                                                                                423;
                                                                                                                                                                                                                                                                                                                                                                            REF.
                                                                                                                                                                                                                                                                                                                             69;
                                                                                                                                                                                                                                                                                                                                                                            <u>'</u>
                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   έ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAS
                                                                                                                            357
                                                                                                                                                                  301
                                                                                                                                                                                    196
                                                                                                                                                                                                       246
                                                                                                                                                                                                                           164
                                                                                                                                                                                                                                             186
                                                                                                                                                                                                                                                                  107
                                                                                                                                                                                                                                                                                      126
                                                                                                                                                                                                                                                                                                                            16;
```

ZN85_HUMAN Q039Z3; 01-JUN-1994 01-OCT-1996 10-OCT-2003

(Rel. (Rel. (Rel.

29, 34, 42,

Last Last

annotation sequence

update)

update)

Created)

HUMAN

STANDARD;

595

ΑĀ

```
PRESENTATION AND DESCRIPTION OF THE PRESENTATION OF THE PRESENTATI
DOMAIN
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
                                                                                                                 SMART; SM00355; ZHE CHART; SM00355; KRAB; 1.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS00028; ZINC_FINGER_C2H2_2; 15.

PROSITE; PS50157; ZINC_FINGER_C2H2_2; 15.

PROSITE; PS50157; ZINC_FINGER_C2H2_2; DNA-binding; Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; U35376; AAA79179.1; -.
EMBL; M61866; AAA52689.1; -.
EMBL; M61868; AAA58671.1; -.
PIR; C39384; C39384.
PIR; G02075; G02075.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Functional analysis of ZNF85 KRAB the highly homologous ZNF91 family DNA Cell Biol. 17:931-943(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Poncelet D.A., Bellefroid E.J., Basti Marine J.C., Pendeville H., Alami Y., Muller M., Martial J.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZNF85.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        subfamily of Proc. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=91219421; PubMed=2
Bellefroid E.J., Poncelet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 1-196 FROM N.A. MEDLINE=91219421; PubMed=2023909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001909; KRAB.
InterPro; IPR007087; Znf C2H2.
InterPro; IPR007086; Znf_C2H2_sub.
Pfam; PF01352; KRAB; 1.
Pfam; PF00096; zf-C2H2; 15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRANSFAC; T04990; -. Genew; HGNC:13160; ZNF85.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Martial J.A.; "The evolutionarily conserved Kruppel-associated box
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=99053537;    PubMed=9839802;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota;
                                                                                                                                                                                                                                                         PRINTS; PRO0048; ZINCEINGER.
PRODOM; PD000003; Znf_C2H2; 13.
SMART; SM00349; KRAB; 1.
SMART; SM00355; Znf_C2H2; 15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               iomo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSSP; P08048; 7ZNF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GO:0005634; C:nucleus; TAS. GO:0003714; F:transcription GO:0003700; F:transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              European Bioinformatics Institute. The by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: Contains 1 KRAB domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEVELOPMENTAL STAGE: Expressed early during embryonic development. SIMILARITY: BELONGS TO THE KRUEPPEL FAMILY OF C2H2-TYPE ZINC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION: Nuclear. TISSUE SPECIFICITY: Expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BEL
FINGER PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: Transcriptional repressor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        finger protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           603899; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                non-profit institutions as long as its content is in no way and this statement is not removed. Usage by and for commercial requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   f eukaryotic multifingered proteins.";
Acad. Sci. U.S.A. 88:3608-3612(1991).
  4
146
174
202
230
258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Human)
    75
168
196
224
252
280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AND CHARACTERIZATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Zinc finger protein HPF4) (HTF1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85 KRAB zinc finger protein, a member of family.";
  C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                        C2H2-TYPE .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lecocq P.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bastiaens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          factor activity; TAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             co-repressor activity; TAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  preferentially in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Devos N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            There are no rest
                                                                                                (DEGENERATE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Revelant 0.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Demoitie M.A.,
Lecocq P.J., C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    testicular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      defines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ogawa T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           엺
```

```
RESULT
ZN93_HU
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                             뮹
                                                                                                                                                                                                                                                                                                                                              λÃ
                                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                     В
   B
                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
                                                                                                                                                                                                     ZN93 HUMAN
P35789; Q9Y2N8;
01-JUN-1994 (Re
SEQUENCE FROM N.A.

Lamerdin J.E., McCready P.M., Skowronski E., Sakaldasis G.,

Lamerdin J.E., McCready P.M., Skowronski E., Scott D., Stilwagen S.,

Burkhart-Schultz K., Gordon L., Dias J., Scott D., Stilwagen S.,

Phan H., Velasco W., Do L., Regala W., Terry A., Danganan L.,

Erler A., Christensen M., Georgescu A., Avila J., Attix C.,

Andreise T., Trankheim M., Amico-Keller G., Coeffield J., Duarte in Lucas S., Bruce R., Thomas P., Quan G., Kronmiller B., Arellano, Sanders C., Ow D., Nolan M., Trong S., Kobayashi A., Olsen A.S.,

Carrano A.V.;
                                                                                                                                                                                                                                        HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CONFLICT
                                                                                                                                                                                 16-OCT-2001
10-OCT-2003
                                                                                                                          Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                  Homo
                                                                                                               NCBI_TaxID=9606;
                                                                                                                                                  sapiens (Human)
                                                                                                                                                                        finger
                                                                                                                                                                                                                                                                                                                              456
                                                                                                                                                                                                                                                                                                                                                                                                                      357
                                                                                                                                                                                                                                                                                                                                                                                                                                          186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                                                                                                                     304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                                                                                                                                  514 ECGKAFNQSSKLTKHKKIH 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SL-RHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSV
                                                                                                                                                                                                                                                                                                                                                                                               LVEHYNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDELDSL
                                                                                                                                                                                                                                                                                                                                                                                                                                         LQFH--IKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSNLIKHKKIHTGEKPYKCEECGKAFNRFSTLTTHKIIHTGEKPYKC--KECGKAFNRSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ISCLTEHSRIHTRVNFYKC--EECGKAFNWSSTLTKHKRIHTGEKPYKC-
                                                                                                                                                                                                                                                                                                        NCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                              CEKCGKAFNOSSNLTRHKKSHTEEKPYKCEECGKGFKWPSTLTIHKIIHTGEKPYKC--B
                                                                                                                                                                                                                                                                                                                                                     DEKRSDVRSDSMSAQRSIKSFTASL-----EGSK-----SVSKLISNSGKKINCPKN 350
                                                                                                                                                                                                                                                                                                                                                                            TLTKHKIIHTGE
                                                                                                                                                                                                                                                                                                                                                                                                                    ISSLISSS-SSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFR
                                                                                                                                                                     (Rel. 29, Created)
(Rel. 40, Last sequence update)
(Rel. 42, Last annotation update)
protein 93 (Zinc finger protein HTF34) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     286
314
370
370
398
426
426
5338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3336
3364
420
420
4420
532
532
532
1177
1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68718 MW;
                                                                                                                                      Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48;
                                                                                                                                                                                                                                                                                                                                                                           -KPYKSKECEKAFNQSSKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C2H2-TYPE.

C2H2-TYPE.

C2H2-TYPE (

C2H2-TYPE.

C2H2-TYPE.

C2H2-TYPE.

C2H2-TYPE.

C2H2-TYPE.

C2H2-TYPE.

C2H2-TYPE.

R -> Q (IN I

R -> R (IN I

R -> R (IN I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 44AA0A236D62D43B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                396.5;
No. 1.6
                                                                                                                                                                                                                              616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (DEGENERATE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .6e-16;
                                                                                                                                                                                                                              AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA52689)
AAA58671)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA58671).
AAA58671).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                             TEHKKIHTGEKPYE---
                          Arellano A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            595;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -EECGKAFNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                     s.,
                                                                                                                                                                                                                                                                                                                                                                                                                        411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68
                                                                                                                                                                                                                                                                                                                                                                             455
                                                                                                                                                                                                                                                                                                                                                                                                  303
                                                                                                                                                                                                                                                                                                                                                                                                                                              243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17;
```

```
Pfam; PF01322; KRAB; 1.

Pfam; PF00096; zf-C2H2; 16.

Pfam; PF000048; ZINCFINGER.

PRODOM; PD000003; Znf C2H2; 7.

SMART; SM00349; KRAB; 1.

SMART; SM00355; ZnF C2H2; 16.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS500228; ZINC_FINGER_C2H2 1; 16.

PROSITE; PS50157; ZINC_FINGER_C2H2 2; 17.

Transcription regulation; Zinc-finger; DNA-k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MIM; 603975; -. GO; GO:0005634; GO; GO:0003700; I GO; GO:0008270; I GO; GO:0006355; I
                             ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GO; GO:0006355; P:regulation of transcription, DNA-dependent; NAS InterPro; IPR001909; KRAB. INTERPRO; IPR007087; Znf C2H2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; M61873; AAA83548.1;
HSSP; P08046; 1A1H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - :-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bellefroid E.J., Poncelet D.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   subfamily of eukaryotic multifingered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Martial J.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=91219421;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 1-191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Sequence analysis of a D198455.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GO:0005634; C:nucleus; NAS.
GO:0003700; F:transcription factor activity; NAS.
GO:0008270; F:zinc ion binding; NAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEVELOPMENTAL STAGE: EXSIMILARITY: BELONGS TO FINGER PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBCELLULAR LOCATION: Nuclear (Probable)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family of eukaryotic multifingered proteins.";
c. Natl. Acad. Sci. U.S.A. 88:3608-3612(1991).
FUNCTION: May be involved in transcriptional regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: Contains 1 KRAB domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           evolutionarily conserved Kruppel-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AC007204;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HGNC:13169; ZNF93.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR007086;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (APR-1999) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAD22981.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FROM N.A.
PubMed=2023909;
     Znf_C2H2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Expressed early during embryonic THE KRUEPPEL FAMILY OF C2H2-TYPE
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KRAB.
C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sub.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lecocq
                                                    NI N
                                                                                                       Ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA-binding; Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in 19p13.1 between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [ P.J.,
     REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (DEGENERATE)
                                                                                                    REF.
Revelant
                                                                                                 2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        box domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nbryonic development
C2H2-TYPE ZINC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OLFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        defines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D)
```

```
RESULT
ZN91_H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZN91_HUMAN
Q05481;
01-JUN-1994
01-JUN-1994
                                                                                                                                                                                                                                                                                                          SEQUENCE (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LT 8
    This
                                                                                                                                                                                    "The evolutionarily conserved Kruppel-associated subfamily of eukaryotic multifingered proteins.", Proc. Natl. Acad. Sci. U.S.A. 88:3608-3612(1991)
                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.

MEDLINE=93223677; PubMed=8467795;

Bellefroid E.J., Marine J.C., Ried T., Lecocq P.J., Riviere M.,

Bellefroid E.J., Poncelet D.A., Coulie P.G., de Jong P.J.,

Amemiya C.T., Poncelet D.A., Coulie P.G., de Jong P.J.,

Szpirer C., Ward D.C., Martial J.A.,

"Clustered organization of homologous KRAB zinc-finger genes with

enhanced expression in human T lymphoid cells.",

EMBO J. 12:1363-1374(1993).
                                                                                                                                             ÷
                                                                                                                                                                                                                                                                            MEDLINE=91219421; PubMed=2023909;
Bellefroid E.J., Poncelet D.A., Lecocq P.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota;
Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZNF91.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                     SUBCELLULAR LOCATION: Nuclear (Probable)
SUBLARITY: BELONGS TO THE KRUEPPER PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSIONERS PROFESSION
                                                                                        FINGER PROTEINS.
SIMILARITY: Contains 1 KRAB domain.
                                            CAUTION: THE SEQUENCE FROM POSITION 1159
DERIVED FROM THE TRANSLATION OF AN ALU RE
  SWISS-PROT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                OF 15-204 FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LKETEVKKLENLLDQGSKLNNLHELET--EKLKVEEDEEDEEDS----LDEKRSDVRSDSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KCEECGKAF--HLSTHLTTHKILHTGEKPYRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SAORSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLKWH 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLRHH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KPYIC--EECGKAFKYSSALNTHKRIHTGEKPYKC--DKCDKAFIASSTLSKHBIIHTGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YKCEECGKAFN---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGKAFVASSTLSKHEIIH---TGKKPYKCEEC--GKAFNQSSSLTKHKKI-HTGEKP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNIFHDGNIFDDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ECGKAFIWSSVLTRHKRVHTGEKPYKCEE--CGKAFKYSSTLSSH-KRSHTGEKPYKCEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YVCEECGKAFKYSRILTTHKRIHTGEKPYKCNKCGKAFIASSTLSRHEFIHMGKKHYKCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KPYKCEECGKAFNQSSTLTKHKKIHTGEKPYKC--EECGKAFNQSSTLTKHKKIHTGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Rel. 29, Last sequence update) (Rel. 42, Last annotation update protein 91 (Zinc finger protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (Rel. 29, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA.
entry is copyright.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70572 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17.7%;
29.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -QSSSLTKHKKIHTGEKPYKCEECGKAFNQSSTLIKHKKIHTREKPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ILSVH-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HGGSPAYQCDHPGCFKNFQTWSVLQFHIKQSH---PKLKCPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 395; DB
Pred. No. 2.1e
42; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Ve
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DF309883AB61160A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -EKTLTCKQCNKVFTRPSKLAQHKLKH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .le-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             --RECGKAFNHSATLSSHKKIH
                                            REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HTF10) (HPF7)
                                                                  TO
                                                                                                                                                                                                                                                                                 Revelant
                                                                  THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 616;
                                                                                                                                                                                                                                   xod
                                                                                                                                        C2H2-TYPE
                                                                    C-TERMINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                 0
                                                                                                                                      ZINC
                                                                                                                                                                                                                                   defines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              250
```

It is produced through a collaboration

```
Query Match
Best Local S
Matches 98
                                                                           DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DOMALN
DO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 between the Swiss Institute of Bioinformatics and the EMBL outst
the European Bioinformatics Institute. There are no restrictions
use by non-profit institutions as long as its content is in
modified and this statement is not removed. Usage by and for com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS50805; KRAB; 1.
PROSITE; PS00028; ZINC_FINGER_C2H2_1; 31.
PROSITE; PS50157; ZINC_FINGER_C2H2_2; 35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PRO0048; ZINCFINGER.
PTCDOM; PD000003; Zmf_C2H2; 20.
SMART; SM00349; KRAB; 1.
SMART; SM00355; Zmf_C2H2; 33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR001909; KRAB.
InterPro; IPR007087; Znf_C2H2.
InterPro; IPR007086; Znf_C2H2_sub.
Pfam; PF01352; KRAB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; L11672; AAA59469.1; -.
EMBL; M61871; AAA58672.1; ALT_SEQ.
PIR; S35305; S35305.
HSSP; P08047; 1SP2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Transcription
Nuclear protei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00096; zf-C2H2; 34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genew; HGNC:13166; ZNF91.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO:0003700; F:transcription factor activity; NAS.
GO:0008270; F:zinc ion binding; NAS.
GO:0006355; P:regulation of transcription, DNA-dependent; NAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO:0005634; C:nucleus; NAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        603971;
98; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                               17.7%;
nilarity 35.8%;
Conservative 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               regulation;
                                                                 ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Repeat.
                                                                                                                               1016
1044
1072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      456
                                                                 137225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zinc-finger;
 40;
Score 393.5; I
Pred. No. 5.2e-
40; Mismatches
                                                                                C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                               C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                         C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                          C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                         C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                        C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                       C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                       C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                        C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C2H2-TYPE
                                                                                                                 C2H2-TYPE
                                                                 581056BB11B8716D
                                                                                                                                                                                              TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -TYPE
                                                                                                                                                                                                                                                                           -TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (DEGENERATE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA-binding; Metal-binding;
                                                                                                                                                                                                                                (DEGENERATE).
                                                                                                                                                                                                                                                                                                                                                                                                                                         (DEGENERATE).
                  .2e-16;
                               DB 1;
                                                                    CRC64;
   Indels
                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL outstation
                                 1191;
   27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         commercial
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 G
     12;
```

```
RESULT 9
Z347_HUMAN
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Z347 HUMAN (
Q96SE7; Q8TCN1;
28-FEB-2003 (Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-FEB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Zinc finger protein 347 (Zinc finger 1111).
ZNF347 OR ZNF1111.
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                              EMBL:
                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
Aitken C.J., Nicholson G.C.;
RANKL regulated zinc finger
Submitted (APR-2001) to the E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                            use by non-profit institutions as long modified and this statement is not remove entities requires a license agreement (8 or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 305-839 FROM N.A.
                          PRINTS; PRO0048; ZINCFINGER.
PRODOMO9; ZDMF_C2H2; 2.
SMART; SM00349; KRAB; 11.
SMART; SM00355; ZDF_C2H2; 19.
                                                                                                                                                                                                                                                                                                                                                   FINGER PROTEINS.
-!- SIMILARITY: Contains 1 KRAB domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606;
                                                                                        Pfam; PF01352; KRAB; 1.
Pfam; PF00096; zf-C2H2; 18.
                                                                                                                   InterPro; IPR007087; Znf_C2H2.
InterPro; IPR007086; Znf_C2H2_sub.
                                                                                                                                                     Genew; HGNC:16447; ZNF347.
InterPro; IPR001909; KRAB.
                                                                                                                                                                                   EMBL; AY029765; AAK37403.1;
EMBL; AL713691; CAD28491.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1130 GE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL-RHHILSVH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TREKPYKC--EECGKAFSQFSHLTTHKRMHTGEKFYKC--EECGKAFSQSSTLTTHKIIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---LKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFHIKQSHPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GNIPDDLLKETEVKKLENLLDQGSKLNNLHELET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EKPYKCEECGKAFSQSSTLTRHKRLH---TGEKPYKCGEC--GKAFKESSALTKHKIIHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EKPYKCEECGKAFNRSSKLTTHKIIHTGEKP-YKCEE--CGKAFISSSTLNGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGEKPYKCEECGKAFRKSSTLTEHKIIHTGEKPYKC--EECGKAFSQSSTLTRHTRMHTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Rel. 41, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---KPYKCEKCCKAFNQSSILTNHKKIHT 1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         r protein in osteoclastogenesis.";
EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        839
                                                                                                                                                                                                                                               (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                287
                                                                                                                                                                                                                                                                                                                                                                                                                                               Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -KRIHTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              79
```

PROSITE; PS00028; ZINC_FINGER_C2H2_1; 17

PS50805;

KRAB;

```
RESULT 10
Z431 HUMAN
ID Z431
AC Q8TES
DT 10-OC
DT 10-OC
DT 10-OC
DE Zinc
GN ZNF43
OS HOMO
OC EUKaz
OC Mamma
OX NCBI
RP SEQUI
                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                      Homo sapiens (Human).
Eukaryota; Metazoa; (
Mammalia; Eutheria; !
                                                                                                                       Z431_HUMAN STANDARD; PRT; 576 AA (ORT#32) (ORT#32) (ORT#32) (Rel. 42, Created) 10-OCT-2003 (Rel. 42, Last sequence update) 10-OCT-2003 (Rel. 42, Last annotation updat Zinc finger protein 431.
                                                                                                                                                                                                                                                                                HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FIN
                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                 FROM
                                                                                                                                                                                                                                                                                                                                                              HQRVH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                       HLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VEHYNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEEDSLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTHQVIHTGEKPYKCNECGKVFTQNSHLARHRGIH---TGEKPYKCNEC--GKVFRHNSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SSL-ISSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LSRHQRIHTGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QFH--I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LTTHQVIHTGEKPYKONECGKVFTQNSHLANHQRIHTGVKP-YMCNE--CGKAFSVYSSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L-RHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SLAIHLVIHTGEKPYKCHECGKVFRRNSHLARHQLIHTGEKPYKC--NECGKAFRAHSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSLAIHQATHSGEKPYKC--NECGKVFTQNSHLTNHWRIHTGEKPYKC--NECGKAFGVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS50157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                              703
                                                                                                                                                                                                                                                                                                                                                                                                    369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             regulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZINC_FINGER_C2H2_2;
                                                                      Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             367
395
423
421
479
535
535
591
619
647
675
675
703
731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95771 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                    -CGKVFTQNSHLAR--HRRVHTGGKPYQC--NECGKAFSQTSKLAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --YKYNEYGK---AFSEHSNLTTHQVIHTGEKPYKCNE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 387.5; DB 1;
Pred. No. 8e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KRAB.
C2H2-TYPE
C2H2-TYPE.
                                                                      Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F7F7CC7069E7844E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -TYPE
                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20.
; Zinc-finger; Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (DEGENERATE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (DEGENERATE)
                                                                                                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         127
      PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF THE PRESEN
DOMAIN
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
```

```
RX MEDLING-22388257; PubMed=12477932;

RX MEDLING-22388257; PubMed=12477932;

RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA HOpkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

RA Hopkins R.F., Jordan R., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Wackernan K.J., Abramson R.D., Millahy S.J.,

RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunarathne P.H.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RA Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Rahey J., Helton E., Shevchenko Y., Bouffard G.G.,

RA Rahey J., Helton E., Schein J.W., Schein E.D., Dickeon M.C.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Rahey J., Helton E., Jones S.J.M., Marra M.A.,

"Generation and initial analysis of more than 15,000 full-length human

"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR00199; KRAB.

InterPro; IPR007087; Znf C2H2.

InterPro; IPR007086; Znf C2H2.

InterPro; IPR007086; Znf C2H2.

InterPro; IPR007086; Znf C2H2; 12.

Pfam; PF01352; KRAB; 1.

Pfam; PF00096; Zf C2H2; 12.

PRINTS; PR000348; KRAB; 1.

SMART; SM00349; KRAB; 1.

SMART; SM00345; ZnF C2H2; 12.

SMART; SM00355; ZnF C2H2; 12.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS50805; ZINC_FINGER C2H2 1; 12.

PROSITE; PS50157; ZINC_FINGER_C2H2 2; 13.

Transcription regulation; DNA-binding; Zinc_FINGER_C2H2 2; 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nuclear protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; BC040506; AAH40506.1
Genew; HGNC:20809; ZNF431.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or send an email to license@isb-sib.ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entities requires a license
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FINGER PROTEINS.
-!- SIMILARITY: Contains 1 KRAB domain.
-!- SIMILARITY: Contains 13 C2H2-type zinc fingers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nagase T., Kikuno R., Ohara O.;
"Prediction of the coding sequences of unidentified human genes. XXII.
The complete sequences of 50 new cDNA clones which code for large
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=21842142; PubMed=11853319; Nagase T., Kikuno R., Ohara O.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA Res. 8:319-327(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AB075849; BAB85555.1; ALT_INIT.
BC040506; AAH40506.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FROM
                                                                                                                                                                                                                                                                                                                                                            Repeat.
                                                                                                                                                                                                                                                                                                                          106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      agreement
KRAB.
C2H2-TYPE
C2H2-TYPE
C2H2-TYPE
C2H2-TYPE
C2H2-TYPE
C2H2-TYPE
C2H2-TYPE
C2H2-TYPE
C2H2-TYPE
C2H2-TYPE
C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                          12.
13.
; Zinc-finger; Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   There are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FAMILY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C2H2-TYPE ZINC:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
```

7654321

(DEGENERATE)

8. 10

collaboration outstation

no no way

This SWISS-PROT entry is copyright. It is produced through a collable between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commodified and this statement is not removed.

(See http://www.isb-sib.ch/announce/

```
RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RESULT RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Z228 HUMAN
Q9UUTI3; Q9HCA7;
30-MAY-2000 (Rel. 39, Created
30-MAY-2000 (Rel. 39, Last sf
10-OCT-2003 (Rel. 42, Last a)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZN_FING
ZN_FING
ZN_FING
CONFLICT
SEQUENCE
                                                                                                                                            gene clust
Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Choroata; Mammalia; Eutheria; Primates;
                                                                                                                                                  "Sequence analysis of a 1Mb gene cluster.";
                                                                                                                                                                                                      Kodoyianni V., Ge
Severin J., Gordon
                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                        "Differential expansion of homologous zinc-finger gene bluman chromosome 19q13.2 and mouse chromosome 7.";
Submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                      Stubbs L.;
                                                                                                                                                                                                                                                                                                                                                                         Shannon
                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                        mitted (OCT-2000) to the EMBL/GenBank/DDBJ databas FUNCTION: May function as a transcription factor. SUBCELLULAR LOCATION: Nuclear (Probable). SIMILARITY: BELONGS TO THE KRUEPPEL FAMILY OF C2H FINGER PROTEINS.
                   SIMILARITY:
SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             æ
                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FNRSPQLTAHKITHTGE-----KPYKCEECGKAFSQSSILTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QTWSVLQFH--IKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FNQSSTLSTHKFIHAGEKPYKCEECDKAFNRFSYLTXHKI-IHTGEKSYKCEE--CGKGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FYKHQSL-RHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KAFKOSSTLTTHKIIHTGEKPYRCEECGKAFNRSSHLTTHKIIHTGEKPYKC--EECGKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KSFCMLLHLSQHKRIHIRENSYQC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KSISSLISSSSS----RPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSTLTKHRKIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EEDSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AKKNELVEHYNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NWSSTLTKHKRIHTGEKPYKCEVCGKAFNESSNLTTHKMIH---TGEKPYKCEEC--GKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 456
484
512
198
576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                         Branscomb
                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ΑĀ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HKRIHTGEKPYKCEECGKAFNRSSNLTK--HKIIHTGEKSYKC--EECGKAFNQ
                                                                                                                                                                                                                           Gе Υ.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      478
506
534
198
67216
                 Contains 1 KRAB domain.
Contains 17 C2H2-type z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17.3%;
29.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   534
                                                                                                                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                                                                                    Krummel G.K.,
Shannon M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Œ,
                                                                                                                                                                                                                                                                                                                                                                            Hauser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence update)
annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C2H2-TYPE 11.

C2H2-TYPE 12.

C2H2-TYPE 13.

C2H2-TYPE 13.

H -> R (IN REF. 2).

H -> R (532774BF69EC9EZA C
                   C2H2-type zinc
                                                                                                                                                                                       region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                         L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         385;
No. 7
                                                                                                                                                                                  ., Kvikstad E
, Brower A., (
n in 19q13.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -EECGKAFKWFSTLTRHKRIHTGEKPFKC--EECG
                                                                                                                                                                                                                                                                                                                                                                              Gordon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A
                       fingers
                                                                                                                                                                                                                                                                                                                                                                            Ľ.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      158;
                                                                                                                                                                                                            E., Gra
, Olsen
                                                                                                                                                                                    E., Grable L.,
Olsen A.S., Smith
containing a zinc
                                                                                                                                                databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                                                                                                              Ashworth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                      C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               576;
                                                                                                                                                                                                                                                                                                                                     families
                                                                                                                                                                                                                                                                                                                                                                            ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56;
                                                                                        ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                       L.M.;
finger
                                                                                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          523
```

```
Š
                                                                                   δÃ
                                                                                                        뮍
                                                                                                                          Ş
          Š
                             밁
                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF01352; KRAB; 1.

Pfam; PF01352; KRAB; 1.

PRINTS; PR00048; ZINCTINGER.

PRODOM; PD000003; Znf C2H2; 12.

SMART; SM00349; KRAB; 1.

SMART; SM00349; KRAB; 1.

SMART; SM00355; ZnF C2H2; 13.

PROSITE; PS050805; KRAB; 1.

PROSITE; PS050805; KRAB; 1.

PROSITE; PS050805; KRAB; 1.

PROSITE; PS050805; ZNC_FINGER C2H2 1; 13.

PROSITE; PS050157; ZINC_FINGER C2H2 2; 17.

Transcription regulation; DNA-binding; Zinc-
                                                                                                                                                Matches
                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                           DOMAIN
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
                                                                                                                                                                                             CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                            CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Transcription regulation;
Nuclear protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                   ZN FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AF198358; AAF12816.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P08047;
            198
                                                                                                                             23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HGNC: 13021
                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR001909; KRAB
IPR007087; Znf_(
IPR007086; Znf_(
KCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHDGNIP
                             YKCEECGKGFSKASTLLAHQRVHTGEKÞ-ÝQCDE--CGKSFSQRSYLQSHQSVHSGERPY
                                                                                   KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLR-HHILSVHEKT
                                                                                                        KPYKC--EECDKGFSRSSYLQAHQRVHTGEKPYKC--EECGKGFSRNSYLQGHQRVHTGE
                                               LTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IKQSHPKL
                                                                                                                           KKYI CTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHI VSHSEK
                                                                                                                                                                                  485
813
913
                                                                                                                                                                                                                                                                                   258
4443
4471
5525
561
561
561
561
561
561
561
561
777
777
805
                                                                                                                                                Conservative
                                                                                                                                                                                      A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ZNF228
                                                                                                                                                                                                                 113
143
222
261
392
446
                                                                                                                                                                                                                                                                                                                         603
631
659
687
715
743
                                                                                                                                                                                                                                                                                                                                                                                            79
280
465
493
519
547
                                                                                                                                                                                              485
813
                                                                                                                                                                                      105702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Znf_C2H2.
Znf_C2H2_sub.
                                                                                                                                                         17.2%;
30.7%;
                                                                                                                                                                                       M.
                                                                                                                                                55;
                                                                                                                                                                                             C2H2-TYPE 1 (DE
C2H2-TYPE 2 (DE
C2H2-TYPE 3 (DE
C2H2-TYPE 4 (DE
C2H2-TYPE 6.
C2H2-TYPE 6.
C2H2-TYPE 9.
C2H2-TYPE 10.
C2H2-TYPE 11.
C2H2-TYPE 11.
C2H2-TYPE 12.
C2H2-TYPE 13.
C2H2-TYPE 14.
C2H2-TYPE 15.
C2H2-TYPE 15.
C2H2-TYPE 15.
C2H2-TYPE 16.
C2H2-TYPE 17.
VSK -> KFQ (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
S -> V (IN REF
                                                                                                                                                         Score 383;
Pred. No. 1
                                                                                                                                                Mismatches
                                                                                                                                                                                       8D19F5D27CD9FA6B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zinc-finger; Metal-binding;
                                                                                                                                                                                                                                    REF.
                                                                                                                                                                                                                                                                                                                                                                                                               (DEGENERATE)
(DEGENERATE)
(DEGENERATE)
(DEGENERATE)
                                                                                                                                                          6e-15;
                                                                                                                                                                   DΒ
                                                                                                                                                 133;
                                                                                                                                                                                                 EECGKGFSWSFNLQIHQRVHTGEKP
                                                                                                                                                                   Length 913;
                                                                                                                                                                                                                                                                            2)
.
                                                                                                                                                                                       CRC64;
                                                                                                                                                  Indels
                                                                                                                                                58;
                                                                                                                                                  Gaps
                                                                      664
                                                                                           139
                                                                                                             606
                                                                                                                                82
                                                     197
               257
                                  721
```

```
RESULTING COCCE TO THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF THE STANDER OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    무
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                     Pfam; PF00096; zf-C2H2; 3.
ProDom; PD000003; Znf C2H2; 3.
SMART; SM00349; KRAB; 1.
SMART; SM00355; ZnF C2H2; 3.
PROSITE; PS00028; ZINC_FINGER_C2H2_1; 11.
PROSITE; PS00028; ZINC_FINGER_C2H2_2; 12.
Transcription regulation; DNA-binding; ZiNC_Pansoription; Repeat.
Nuclear Protein; Repeat.
Nuclear Protein; Repeat.
DOMAIN
35 107 KRAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (AUG-2000) to the EMBL/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Velleams/Vellea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isogai T., Ota T., Hayashi K., Sugiyama T., Otsuki T., Suzuki Y., Nishikawa T., Nagai K., Sato H., Sugano S., Shiratori A., Sudo H., Wagatsuma M., Hosoiri T., Kaku Y., Kodaira H., Kondo H., Sugawara Takahashi M., Chiba Y. Ishida S., Murakawa K., Ono Y., Takiguchi Matanabe S., Kimura K., Murakami K., Ishii S., Kawai Y., Saito K., Yamamoto J., Wakamatsu A., Nakamura Y., Nagahari K., Masuho Y., Ninomiya K., Iwayanagi T., Willomiya K., Iwayanagi T., Willomiya K., Iwayanagi T., Willomiya K., Iwayanagi T., Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF01352; KRAB; Pfam; PF00096; zf-C2H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AY269787; AAP30885.1; -. EMBL; AK023721; BAB14656.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       between the Swiss Institute of Bioinformathe European Bioinformatics Institute. The Bush by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genew; HGNC:20808; ZNF430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -!- SIMILARITY: Contains 1 KRAB domain.
-!- SIMILARITY: Contains 12 C2H2-type zinc fingers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bi A., ru ביי,
"Homo sapiens mRNA", ביים 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 1-364 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZNF430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-OCT-2003 (Rel. 42, La
10-OCT-2003 (Rel. 42, La
Zinc finger protein 430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9H8G1; Q86
10-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SWISS-PROT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q86V70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR001909;
IPR007087;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QRSIKSFT--ASLEGSKSVSKLISNSGKK-INCPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEEDSLDEKRSDVRSDSMSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ICEVCGKGFSQRAYLQGHQRVH---TRVKPYKCEMCGKG-FSQSSRLEAHRRV-HTGGKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (APR-2003) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g (Human).
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
chordata; (
ch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Rel. 42,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry is copyright.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YKCE-VCTKGFS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KRAB.
Znf_C2H2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to zinc finger pro
e EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of Bioinformatics and the Finstitute. There are no rest tions as long as its content
C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----ESSRLQAHQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      It is produced through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          570
                                                                                                                Zinc-finger; Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tein 85.";
databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -RVHVEGRPYKC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
ເວ ∡
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   317
```

```
RESULT 13
Z184_HUMAN
                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                 γQ
                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                      뭉
                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZZZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FING
                                                                                                                                      518
                                                                                                                                                                              230
                                                                                                                                                                                                                           460
                                                                                                                                                                                                                                                                        172
                                                                                                                                                                                                                                                                                                                     401
                                                                                                                                                                                                                                                                                                                                                                                                              343
                                                                                                                                                                                                                                                                                                                                                                  139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   287
                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94;
060792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                          CDKA----FSQSSTLTKH-KVIHTGEKPYNCEEYGKAFNQSSNLIEQSN
                                                                                                                                                                                                                                                                                                         YKCEECGKGFNWSSTLTKHKRIHTGEKPYKCEQCGKAFNESSNLTAHKIIHTGEKP-YKC
                                                                                                                                                                                                                                                                                                                                                                                                                                             KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL-RHHILSVHEK- 138
                                                                                                                                                                                                                  EE---CGKAFNRSPKLTAHKVIHSGEKPYKCEECGKAFNQFSNLTKHKITHIGDTSYKYLE
                                                                                                                                                                                                                                                                 DHPGCFKNFQTWSVLQFH--IKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                                                                                                         CDYCDVGKFAKKNELVEHYNIFHDGNIPDDLLKETEV-KKLENLLDQGS
                                                                                                                                                                                                                                                                                                                                                                                                     KPYKCEECGKAFNQSSTLTTHKIIHAGEKPYKC--EECGKAFYRFSYLTKHKIIHTGEKF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KPYRC--EECGKTFNRSSHLTTHKRIHTGEKPYRC--EECGRAFNRSSHLTTHKIIHTGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            233
261
289
317
317
345
373
373
401
401
485
485
513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA;
                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         255
283
311
339
367
367
451
451
507
535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                66346 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C2H2-TYPE 2.
C2H2-TYPE 3.
C2H2-TYPE 4.
C2H2-TYPE 4.
C2H2-TYPE 5.
C2H2-TYPE 6.
C2H2-TYPE 6.
C2H2-TYPE 8.
C2H2-TYPE 9.
C2H2-TYPE 10.
C2H2-TYPE 11.
C2H2-TYPE 11.
C2H2-TYPE 12.
C2H2-TYPE 12.
CH2-TYPE 12.
CH2-TYPE 11.
CH2-TYPE 12.
CH2-TYPE 11.
CH2-TYPE 12.
CH2-TYPE 12.
CH2-TYPE 11.
CH2-TYPE 12.
CH2-TYPE 11.
CH2-TYPE 11.
CH2-TYPE 12.
CH2-TYPE 12.
CH2-TYPE 12.
CH2-TYPE 13.
CH2-TYPE 14.
CH2-TYPE 14.
CH2-TYPE 15.
CH2-TYPE 15.
CH2-TYPE 17.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 376; DB 1;
Pred. No. 2.5e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LERNPTNVKNVAKLLTNPQPLLHIR (IN REF. 0561E871DC92B61F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                  751
                                                                                                                                                                                                                                                                                                                                                        -CKQCNKVFTRPSKLAQHKLKHHGGSPAYQC
                  AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 570;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2).
                                                                                                                                                                                                                      517
                                                                                                                                                                                                                                                                 229
                                                                                                                                                                                                                                                                                                                                                        171
                                                                                                                                                                                                                                                                                                                                                                                                     400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
```

```
-Z184 HUMAN
Q99676; O607
15-JUL-1998
16-OCT-2001
    "Identification of a novel Krueppel-related zinc mapping to 6p21.3."; Genomics 40:486-489 (1997).
-i- FUNCTION: May be involved in transcriptional
-i- SUBCELLULAR LOCATION: Nuclear (Probable).
-i- TISSUE SPECIFICITY: PREDOMINANT EXPRESSION IN
-i- SIMILARITY: BELONGS TO THE KRUEPPEL FAMILY OF
                                                                                      MEDLINE=97230463; PubMed=9073517;
Goldwurm S., Menzies M.L., Banyer
                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                               Jazwinska E.C.;
                                                                                                             TISSUE=Placenta;
                                                                                                                         SEQUENCE OF
                                                                                                                                            Submitted
                                                                                                                                                        Phillips
                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                   NCBI_TaxID=9606;
                                                                                                                                                                                                                   Homo sapiens (Human)
                                                                                                                                                                                                                               ZNF184
                                                                                                                                                                                                                                      Zinc finger protein
                                                                                                                                                        3
                                                                                                                                        (MAY-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                       (Rel. 36, Created)
(Rel. 40, Last sequence up
(Rel. 42, Last annotation
protein 184.
                                                                                                                       26-751
                                                                                                                       FROM
                                                                                                                                                                                              Chordata;
Primates;
                                                                                                                       N.A.
                                                                                       Banyer
                                                                                                                                                                                             Craniata; Ve
Catarrhini;
                                                                                        q
                                                                                      .L.,
                                                                                                                                                                                                                                               on update)
                                                                                      Powell
                                                                                                                                                                                                     Vertebrata; Euteleostomi;
                                                                                                                                                                                             Hominidae;
                                                                                      B.L.
      유법
                                   regulation
                                                                 finger
     TESTIS.
C2H2-TYPE
                                                                                      Σ
                                                                 gene
      ZINC
                                                                  (ZNF184)
```

```
Ş
                      Д
                                          8
                                                                  Matches
                                                                                   Query Match
                                                                                                                                                                                          DOMAIN
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no we modified and this statement is not removed. Usage by and for commercial contents are the content of the commercial contents.
                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS50805; KRAB; 1.

PROSITE; PS00028; ZINC_FINGER_C2H2_1; 19.

PROSITE; PS50157; ZINC_FINGER_C2H2_2; 19.

PROSITE; PS50157; ZINC_FINGER_C2H2_2; 19.

Transcription regulation; DNA-binding; Zinc-finger; Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PRO0048; ZINCFINGER.
ProDom; PD000003; Znf_C2H2; 18
SMART; SM00349; KRAB; 1
SMART; SM00355; Znf_C2H2; 19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MIM; 602277; -.
GO; GO:0005634; C:nucleus; NAS.
GO; GO:0003677; F:DNA binding; NAS.
GO; GO:0008270; F:zinc ion binding; NAS.
GO; GO:0008355; P:regulation of transcription,
                                                                                                         CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001909;
InterPro; IPR007087;
InterPro; IPR007086;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a license agreement
                                                                                                                                                  CONFLICT
                                                                                                                                                                       CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                Nuclear protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF01352; KRAB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; P08046; 1A1H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY: Contains 1 KRAB domain.
                       276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PF00096; zf-C2H2; 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL021918; CAA17278.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U66561; AAC51180.1; -.
                                            23
  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGNC:12975; ZNF184.
                                                                           Similarity
   KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYK---
                       KPYKC--DQCGKGFIEGPSLTQHQRIHTGEKPYKC--DECGKAFSQRTHLVQHQRIHTGE
                                            KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                                                    547
746
                                                                                                                                                                                            4446
5302
5302
5586
614
670
670
670
6726
726
                                                                  Conservative
                                                                                                          751 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                Repeat.
                                                                                                                                                                                                                                                                                                                                                      300
328
356
384
                                                                                                                                                   27
295
359
381
498
526
                                                                                                                                                                                                                                                                                                                                                                                                                       99
                                                                                                          86174 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                znf_C2H2_sub.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KRAB
                                                                           16.9%;
25.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C2H2.
                                                                  52;
                                                                                                                                        C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE.
                                                                          Score 376;
Pred. No. 3.
                                                                                                                    KHE ->
                                                                                                                                                                                                                                                C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                              C2H2-TYPE.
                                                                                                                                                                                                                 C2H2-TYPE
                                                                                                                                                                                                                             C2H2-TYPE.
                                                                                                                                                                                                                                                                               C2H2-TYPE
                                                                                                                                                                                                                                                                                           C2H2-TYPE
                                                                                                                                                                                                                                                                                                            C2H2-TYPE
                                                                                                                                                                                                                                                                                                                          C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                     C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                  C2H2-TYPE
                                                                                                            249DFB302C6BC97D
                                                                  Mismatches
                                                                                                                       OHO
HQ
                                                                                                                                                                        PHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (See http://www.isb-sib.ch/announce/
                                                                                                                                        N REF. 2).
N REF. 2).
N REF. 2).
N REF. 2).
N REF. 2).
N REF. 2).
N REF. 2).
                                                                                                                       REF
                                                                                       BB
                                                                             .4e-1
                                                                                                                     REF.
                                                                  146;
                                                                                       μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA-dependent;
                                                                                     Length 751;
                                                                                                            CRC64;
                                                                                                                                2).
                                                                                                                                                                         2)
                                                                  Indels
                                                                  140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a collaboration
    ---SQH-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAS
                                                                  Gaps
                          331
                                               82
      127
                                                                   20
```

```
RESULTE

ID

AC

DT

AC

DT

OLI

DT

O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P08045;
01-AUG-1988
01-AUG-1988
10-OCT-2003
                                                                                               STRUCTURE BY NMR OF A FINGER.
MEDILINE-89378224; PubMed-2506074;
Lee M.S., Cavanagh J., Wright P.E
"Complete assignment of the 1H NM
finger from Xfin. Sequential reso
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              XENLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "RNA binding properties and evolutionary conservation multifinger protein Xfin.";
Nucleic Acids Res. 21:4218-4225(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        XFIN_XENLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ruiz i Altaba A., Perry-O'Keefe H., "Xfin: an embryonic gene encoding a
                                   structure.";
FEBS Lett. 2
                                                                                                                                                                                                                                                                                                                                                  binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=94021366;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=88082679; PubMed=2826129;
Ruiz i Altaba A., Perry-O'Keefe H
                                                                                                                                                                                                                                                                                                              Science
                                                                                                                                                                                                                                                                                                                                                                              "Three-dimensional solution structure
                                                                                                                                                                                                                                                                                                                                                                                                                 Lee M.S., Gippert
                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=89346749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRUCTURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Andreazzoli M., de Lucchini S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHARACTERIZATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kenopodinae; Kenopus
       FUNCTION: BINDS RNA. COULD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202
                                                                                                                                                                                                                                                                                                                  245:635-637(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6:3065-3070(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YKCNECGKAFNGPSTFIRHHMIHTGEKPYECNECGKAFSQHSNLTQHQKTHTGEKP-YDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ------LRHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KPYTCNECGKAFSQRGHFMEHQKIHTGEKPFKC--DECDKTFTRSTHLTQHQKIHTGEKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AE--CGKSFSYWSSLAQHLKIHTGEKPYKCNECGKAFSYCSSLTQHRRIHTREKPFECSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KAFRHCSSLAQHQKTHTEEKPYQCNKCEKTFSQSSHLTQHQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGKAFSYLSNINOHOKTH---TQEKAYECKEC--GKAFIRSSSLAKHERI-HTGEKPYQC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNIFHDGNIP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DHPGCFKNFQTWSVLQFHIK----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IHTGEKPYKC--NECDKAFSRSTHLTEHONTH 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ISNSGKKINCPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HECGKTFSYGSS11QHRKIHTGERPYKCNECGRAFNQNIHLTQHKRIHTGAKPYBCAECG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΥВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rel. 08, Last of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the 
                                          254:159-164(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Rel. 08, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NMR OF FINGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 --DDLLKETEVKKLE---NLLDQGSKLN-NLHELETEKL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=7692399;
PubMed=7692399;
PubMed=7692399;
                                                                                                                                                                                                                                                                                                                                                                                                                     G.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PubMed=2503871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KVEEDEEDEEDSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKL
                                                                                                                                                                                                                                                                                                                                                                                                                     Soman K.V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence
                                                                                                             1H NMR spectrum
l resonance assi
                                                                                                                                                                                ₽.Ε.;
              FUNCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Melton D.A.;
multifingered protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1350
                                                                                                                                                                                                                                                                                                                                                                                     Case D.A., Wri
re of a single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
                                                                                                         strum of a synthetic assignments and seco
              H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Barsacchi
                 POST-TRANSLATIONAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----QSHPKL-----KCPK
                                                                                                                                                                                                                                                                                                                                                                                                                     Wright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                            פי
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
f
                                                                                                                    secondary
                                                                                                                                                                                                                                                                                                                                                                                        finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ij
                                                                                                                                                                                                                                                                                                                                                                                            DNA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               290
```

```
PARTER PROPERTY OF A CONTROL OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY O
DOMAÍN
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
ZN PING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF01352; KRAB; 1. — Pfam; PF00096; zf-C2H2; 36. ProDom; PD000003; Znf_C2H2; 20. SMART; SM003049; KRAB; 1. SMART; SM00355; Znf_C2H2; 35. PROSITE; PS50805; KRAB; 1. SROSITE; PS00028; ZINC_FINGER_C2H2_1; 35. PROSITE; PS00028; ZINC_FINGER_C2H2_2; 37. Zinc-finger; Metal-binding; RNA-binding; Repeat; 3D-structure; PNosphorylation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001909; KRAB.
InterPro; IPR007087; Znf_C2H2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; X06021; CAA29425.1; -. PDB; 1ZNF; 15-OCT-91.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGULATION PROCESSES.
SUBCELLULAR LOCATION: Cytoplasmic.
TISSUE SPECIFICITY: OOCYTES AND IN SPECIALIZED CELL
AS NEURAL RETINA CONES.
DEVELOPMENTAL STAGE: EXPRESSED THROUGHOUT COGENESIS
EMBRYOGENESIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: Contains 1 KRAB domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PTM: Phosphorylated.
SIMILARITY: BELONGS TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FINGER PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN: CONTAINS 37
  FINGER MOTIFS IN 6 DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THE
                  C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
C2H2-TYPB.
                                                                                                                                                                                                                                                                                                                                KRAB.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KRUEPPEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FAMILY OF C2H2-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZINC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUCH
```

```
RESULT 15
Z257_HUMAN
CCCCCCCTTTTAAARRARA
                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SPITT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Sim:
Matches 119;
                                                                                                                                                                                                                                                                                        Z257 HUMAN
Q9Y2Q1;
16-OCT-2001
                                                                                               SEQUENCE FROM N.A.
TISSUB-Bone marrow;
MEDLINE=20054457; PubMed=10585455;
Han Z.-G., Zhang Q.-H., Ye M., Kan L.-X., Gu B.-W., He K.-L.,
Shi S.-L., Zhou J., Fu G., Mao M., Chen S.-J., Yu L., Chen Z.;
"Molecular cloning of six novel Kruppel-like zinc finger genes
hematopoietic cells and identification of a novel transregulato
                                                                                                                                                                                                        Homo sapiens (Human)
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAND
HELIX
HELIX
TURN
SEQUENCE
                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                            Zinc finger protein ZNF257 OR BMZF4.
                                                                                                                                                                                                                                                                  16-OCT-2001
10-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                      677
                                                                                                                                                                                                                                                                                                                                                                                                                                            321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 572
                                                                                                                                                                                                                                                                                                                                                                        732 FHEILIRRENLTRSEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FIQKSAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SFLNHQQTHSREKPYLCSH--CNKGFIQNSDLVKHFRTHTGERPYQCA--ECHKGFIQKS
                                                                                                                                                                                                                                                                                                                                                                                                                                       IKSFTASLEGSKSVSKLISNSGKK-INCPKNNCDRMFSREYDLRRHLKWHD-DNLQRIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LDQGSKLNNLHELETEKLKVEEDEEDEEDSLDEKRSDVRSDSMSAQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL
                                                                                                                                                                                                                                                                                                                                                                                              FLN-SIEKEETPEGEP
                                                                                                                                                                                                                                                                                                                                                                                                                   NKRFT---EGSSLVKHRRTHSGEKPYRCPQ--CEKTFIQSSDLVKHLVVHNGENPPAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SDLHKHWRIHTGEKPFPCYTCD-KSFTERSALIKHHRT-HTGERPH-----KCSVCQKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STMIKIW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FSHWSTFMKHSKLHSGEKKFQCAECKKGFTQKSDLVKHIRVHTGEKPFKCLLCKKSFSQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FQTWSVLQFHIK--QSHPKLKCPKCGKGCVGKKGLSHMLSH------DD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ILHQRIHTGERPYKCTLCDRTFIQNSDLVKHQKVHANLPLSDPHTANSPHKCSK--CDLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DLVKHLRTHTGEKPFKCSHCDKKFTERSALAKHQRTHTGEKPYKCS--DCGKEFTQRSNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSLISSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -RHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKH-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16.8%;
nilarity 27.3%;
Conservative 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1066
1350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1052
1056
1063
                                                                                                                                                                                                                                                     (Rel. 40, Created)
(Rel. 40, Last sequence update)
(Rel. 42, Last annotation update)
protein 257 (Bone marrow zinc fin
                                                                                                                                                                                                                               (Human)
                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1052
1062
1065
                                                                                                                                                                                                         Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                155804 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TKHSRTHTGEKPYPCTQCGKSFIQNSDLVKHQRIHTGEKPYHCTEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -TCDYCDVGKFAKKNELVEHYNIFHDGNIPDDLLKETEVKKLENL
                                                                                                                                                                                                                                                                                                                                                                        747
                                                                                                                                                                                                                                                                                                                                                                                              393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 375.5; DB 1;
Pred. No. 6.8e-15;
5; Mismatches 171;
                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27F10AB0851E0AD8
                                                                                                                                                                                                                                                                                                               535
                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                     finger
                                                                                                                                                                                                                                                      4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                                                                      (BMZF-4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -HGGSPAYQCDHPGCFKN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S----S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          128
                                                                                                                                                                                                                                                                                                                                                                                                                                          378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20;
```

domain KRNB.";

J. Biol. Chem. 274:35741-35748 (1999).

-i- FUNCTION: May function as a transcription factor.

-i- SUBCELLULAR LOCATION: Nuclear (Probable).

-i- SUBCELLULAR EBLONGS TO THE KRUEPPEL FAMILY OF C2H
FINGER PROTEINS.

-i- SIMILARITY: Contains 1 KRAB domain.

C2H2-TYPE

ZINC

transregulatory

from

SWISS-PROT entry is copyright.

Ιŧ

25

produced through

D

collaboration

```
8
                                                                                    В
                                                                                                                         8
                                                                                                                                                                            g
                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF01352; KRAB; 1.
Pfam; PF00096; zf-C2H2; 10.
Pfam; PF000046; ZINCFINGER.
PRINTS; PR000003; ZINCFINGER.
PRODOm; PD000003; ZINCFINGER.
SMART; SM00349; KRAB; 1.
SMART; SM00355; ZIPF C2H2; 12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN

ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
ZN FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MIM; 606957; -.
GO; GO:0005634; C:nucleus; NAS.
GO; GO:0005677; F:DNA binding; NAS.
GO; GO:0008270; F:zinc ion binding; NAS.
GO; GO:0008270; P:regulation of transcription, DNA-dependent; NAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its upon the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Transcription regulation; DNA-bindIng; Nuclear protein; Repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS50805; KRAB; 1.
PROSITE; PS00028; ZINC_FINGER_C2H2_1; 10.
PROSITE; PS50157; ZINC_FINGER_C2H2_2; 12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001909; KRAB.
InterPro; IPR007087; Znf C2H2.
InterPro; IPR007086; Znf C2H2_sub.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP; P08047; 1SP2.
Genew; HGNC:13498; ZNF257.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF070651; AAD20957.1; -.
                                                                                                                                     179
                                                                                                                                                                          149 KYVKVFYKFSNSDRHKIRHTEKKTCKCKECGKAFNOSSALTRHKMTHTGEKPYKC--EEC 206
                                                                                      324 AFNRSSHLTOH-KIIHTKEKPYKCEECGKAFNRSSHLTKHKRIH---TREKAYKCDEYCK 379
                                                                                                                                                                                                                                                                     207 GKAFNRSSHLTQHKVIHTREKPYKCEECGKAFNRSSHITQHKRIHNREKPFKYDECCKAF 266
380 AFNWSSALTTLTQHKITHTGEKP
                                          235 VGKFAKKNELVEHYNIFHDGNIP 257
                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                  88;
                                                                                                                                                                                                                                                                                                                                                                                                      8 KSISSLISSSSSRPK-----KYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDC 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                               DKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQEAF 122
                                                                                                                              NFQTWSVLQFHIKQSHPK----LKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCD-YCD 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           535 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  173
2201
2201
229
257
288
316
316
316
372
372
403
431
487
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       195
223
251
282
310
338
338
366
397
425
481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62348 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                16.8%; Score 374; DB 1; Length 535; 33.5%; Pred. No. 3.1e-15; Live 38; Mismatches 115; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C2H2-TYPE.
C2H2-TYPE
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C2H2-TYPE.
C2H2-TYPE.
C2H2-TYPE
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KRAB.
C2H2-TYPE.
C2H2-TYPE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C2H2-TYPE.
C2H2-TYPE.
C2DC5B0C4613BC51 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C2H2-TYPE
  402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (DEGENERATE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zinc-finger; Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ATYPICAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                     22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         no way
```

Search completed: July 22, 2004, 16:46:31 Job time: 14 secs

۲

```
Database :
                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein search, using sw model
        SPTREMBL 25:*

1: sp archea:*
2: sp_bacteria
3: sp fungi:*
4: sp human:*
5: sp inverteb:
6: sp mammal:*
7: sp_mhc:*
8: sp_organelle
9: sp_phage:*
10: sp_phage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebra:*
14: sp_unclassi
15: sp_vricus:*
16: sp_bacteria:
16: sp_acteria:
17: sp_archeap:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1017041 seqs, 315518202 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-831-804-3
2229
1 MSESDETKSISSLISSSSSSS......PLVKKARMDLLPNETSVISR 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                July 22, 2004, 16:43:40 ; Search time 39 Seconds (without alignments) 333.167 Million cell updates/sec
: sp_archea:*
: sp_bacteria:*
: sp_bacteria:*
: sp_numgi:*
: sp_numan:*
: sp_maman:*
: sp_mamal:*
: sp_made:*
: sp_bage:*
: sp_phage:*
: sp_virus:*
: sp_virus:*
: sp_virus:*
: sp_unclassified:*
: sp_vacteriap:*
: sp_acteriap:*
: sp_acteriap:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                      1017041
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Ŋ
G
3
Š
ൃ
H
Ħ

	16	Z.Z	, i	1 1	13	12	11	10	, , ,	α	· ~	1 0	١ د	л	4	ω	N	, µ	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	No.	Result	
	381	785	000.0) 	387	388	388.5	390	390	391	392	392	300	0100	7 C6 E	397.5	400	410.5		Score		
	17.1	17.1	11.6	1	17 4	17.4	17.4	17.5	17.5	17.5	17.6	17.6	1.5	1 .	17 6	17.8	17.9	18.4		Match Length	Query	₩
	493	511	7.67	1	л D	568	501	576	540	592	665	644	U	1 1 1	л Э	395	404	634		ength		
	11	11	11	· -	4	4	ഗ	4	4	4	4	44	4	. #	٠.	4	4	<u>11</u>		DB		
***	0921H6	Q8VEC1	Q8BJ46	COUNTY	0901713	OSTD23	Q9VG72	Q96N22	Q8N211	Q8N8Q4	Q86W65	QBND40	Q96N38	Carrino	OBTUNO	043693	Q8N7Q3	Q8B185	,	TD		000
Karring mine minecuti	רפטוולר שיים שיים ביין:	OBVEC mile milecului		Q80vh2 mus musculu	Xecus mono saprem	Cotdo Company	09va72 drosophila	096n22 homo ganien	OBn211 homo sanien	Ogn8q4 homo sapien	086w65 homo sapien	Q8nd40 homo sapien	Q96n38 homo sapien	Q8iyn0 homo sapien	Office Sapten	CARCON CONTRACT	OBn7g3 homo sanien	OBbi85 mus musculu	pescription			

ALIGNMENTS

ν _ο υ	DR DR DR DR DR DR	DR DR RE	R R R R R R R R R R R R R R R R R R R	ON COORDINATE	RESULT Q8BI85 ID Q
Query Match	InterPro; IPR007 InterPro; IPR007 Pfam; PP0135; K Pfam; PP00096; z PRINTS; PR00048; SMART; SM00349; SMART; SM00355; SMART; SM00355; SMART; PS000288 PROSITE; PS000288 PROSITE; PS500028 PROSITE; PS50157 SEQUENCE 634 AJ	Nature 420:563- EMBL; AK043955; GO; GO:0005622; GO; GO:0003676; GO; GO:0006355; InterPro: IPROO	SEQUENCE I SEQUENCE I STRAIN=C5; MEDLINE=2; MEDLINE=2; The FANTON the RIKEN "Analysis 60,770 ful	01-MAR-2003 01-MAR-2003 01-OCT-2003 Similar to Mus musculu Eukaryota; Mammalia; E NCBI_TaxID=	OBBIS5
h 18.4%; Score 410.5; DB 11; Length 634;	; IPR007087; ; IPR007087; ; IPR007086; 01352; KRAB; 00096; zf-C2H PR000048; ZINC M00349; KRAB; M00349; KRAB; M00355; ZnF-C PS50805; KRAB; PS50028; ZIN PS50157; ZIN PS50157; ZIN	Nature 420:563-573(2002). EMBL; AK043955; BAC31714.1; GO:0005622; C:intracellular; IEA. GO:0003676; F:nucleic acid binding; IEA. GO:0003676; P:regulation of transcription, DNA-dependent; IEA InterPro: IPR001909. KPAP	[1] SEQUENCE FROM N.A. SEQUENCE FROM N.A. STRAIN=CS7BL/6J; TISSUE=Cortex; MEDLINE=22354683; PubMed=12486851; The FANTOM Consortium, The FANTOM Consortium, The RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation 60,770 full-length cDNAs.":	Ol-MAR-2003 (TrEMBLrel. 23, Created) Ol-MAR-2003 (TrEMBLrel. 23, Last sequence update) Ol-OCT-2003 (TrEMBLrel. 25, Last sequence update) Ol-OCT-2003 (TrEMBLrel. 25, Last annotation update) Similar to DNA-binding protein. Mus musculus (Mouse). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus NCBI_TaxID=10090;	PRELIMINARY; PRT; 634 AA.
			on of	•	

32.8%;

Pred. No.

2e-19;

Ş 밁

```
RESULT 2
QUANTO
DE HOMO
OS
HOMO
OS
HOMO
OS
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA
VALE
RA

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity Matches 117; Conser
Matches 121;
                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8N7Q3
Q8N7Q3;
01-OCT-2002
01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Suzuki O., Sasaki N., Aotsuka S., Shoji T., Ichihara T., Shiohata Matsumoto K., Hirano M., Sano S., Nomura R., Yoshikawa Y., Matsumura Y., Moriya S., Chiba E., Momiyama H., Chogawa S., Kaeriyama S., Satoh N., Matsunawa H., Takahashi E., Kataoka R., Kuga N., Kuroda A., Satoh I., Kamata K., Takami S., Terashima Y., Watanabe M., Sugiyama T., Irie R., Otsuki T., Sato H., Wakamatsu A Ishii S., Yamamoto J., Isono Y., Kawai-Hio Y., Saito K., Nishikawa Kimura K., Yamashita H., Matsuu K., Nakamura Y., Sekine M., Kikuchi H., Kanda K., Wagatsuma M., Murakawa K., Kanehori K., Takahashi-Fujii A., Oshima A., Sugiyama A., Kawakami B., Suzuki Y. Sugono S., Nagahari K., Masuho Y., Nagai K., Isogai T.;
                                                                                                                                                                                                                                                                                            -!- SUBCELLULAR LOCATION: NUCLEAR (BY SIMILARITY).

EMBL; AKO97798; BACO5174.1; -.

GO; GO:0005634; C:nucleus; IEA.
InterPro; IPR007087; Znf C2H2.
InterPro; IPR007086; Znf C2H2.
Pfam; PR00096; zf-C2H2; 14.

PRINTS; PR00048. 7777777114.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hypothetical protein FLJ40479. Homo sapiens (Human).
                                                                                                                                     PROSITE; PS00028; ZINC FINGER_C2H2_1; 12.

PROSITE; PS50157; ZINC FINGER_C2H2_2; 14.

Hypothetical protein; Metal-binding; Nuclear protein; Zinc; Zinc-finger.
                                                                                                                                                                                                                                                              Pfam; PF00096; zf-C2H2; 14. PRINTS; PR00048; ZINCFINGER. SMART; SM00355; ZnF_C2H2; 14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                  SEQUENCE
                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                140 LTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH---IKQSHPKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KCRKCGKSFPQLSTLKRHQKIHEDKGHTGEKLYKC--NDCDRSYSYHSSFRRHQKIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SAQRSIKSF--TASLEGSKSVSKLISNSGKKI-NCPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DDLLKETEVKKLE--NLLDQGSKLNNLHELETEKLKVEEDEEDEBDSLDBKRSDVRSDSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KCKECGKSFHYWSSLKSHQNLHSGE---KPYKCKECD-KSFTEKSTLIKHQRI-HTG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHDGNIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YKCKECDKSFTLKSSLRTHQIIHTGEKP-YKCNI--CGKSFNQCTNLKTHQRLHTGEKPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KPYKCNICGKSFNSCTNLKTHQTLHTGEKPYKC--KECGKAFPYMSSLKIHQNLHPGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLR-HHILSVHEKT 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KPYKC--KECGKAFTQSSSLKKHLNLHTGKKPYKC--EECDKSFTEKSTLTTHKRIHTGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                  404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel. 22, Created)
(TrEMBLrel. 22, Last sequence up)
(TrEMBLrel. 24, Last annotation
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KKLYKCNICDK--SFTWCASLKTHK-KFHTGEK-
   17.9%; Sc
33.9%; Pr
ative 39;
                                                                                                                     45923 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54;
   Score 400; DB 4;
Pred. No. 6.3e-19;
9; Mismatches 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                     B1B35F62F5DF0007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                            Length 404;
                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Suzuki Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nishikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57;
         34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       i ⊅.
i T.
         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     378
            19;
```

```
RESULT
043693
                                                                                                   SOUTH THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF THE TRANSPORT OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                          GO; GO:000534; C:nucleus; IEA.
GO; GO:000537; F:metallopeptidase activity; IEA.
GO; GO:0008237; F:metallopeptidase activity; IEA.
GO; GO:0008237; F:metallopeptidase activity; IEA.
GO; GO:0008270; F:zinc ion binding; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA
InterPro; IPR007087; Znf C3H2.
InterPro; IPR007087; Znf C3H2.
InterPro; IPR007087; Znf C2H2.
InterPro; IPR007086; Znf C2H2, 13.
PflnTS; PR000046; Zf-C2H2; 10.
SMART; SM00355; Znf C3H2; 10.
SMART; SM00355; Znf C3H2; 13.
PROSITE; PS00142; ZINC FINGER C2H2_1; 13.
PROSITE; PS00142; ZINC FINGER C2H2_2; 13.
PROSITE; PS00142; ZINC FINGER C2H2_2; 13.
                     Query Match
Best Local Similarity
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-1998
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  043693;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          043693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cancer Genet. Cytogenet. 100:36-42(1998)
-!- SUBCELLULAR LOCATION: NUCLEAR (BY SIEMBL; D70831; BAA24050.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ogawa T., Poncelet D., Kinoshita Y., Noce Udagawa K., Lecocq P., Marine J., Martial "Enhanced expression in seminoma of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; D70831; BAA24050.1;
HSSP; P08048; 7ZNF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zinc-finger
                                                                                                 Metal-binding; Nuclear protein;
NON TER 1 1
SEQUENCE 395 AA; 45291 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=98069676; PubMed=9406578;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Testicular tumor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IKQSHPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KPYKC--EECGKAFNRSSILTKHKIIHTGEKPYKC--EECGKGFSSVSTLNTHKAIHAEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PYKCEECGKAFNRSSILTKHKIIHTGEKP-YKCE--GCGKAFSKVSTLNTHKAIHAEEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLRHHILSVH--EK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KP---YKCEECGKAFTWSSSFTKHKRIHAAE-KPYKCEECGKGFSTFSILTKHKIIHTGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNIFHDGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KRYKCEECGKAF--SWSSILTEHKI IHTGEKPYKC--EECGKAFSRSSSLTRHKRIH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEB-DEEDEEDSLDEKRSDVRSDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YKCEECGKASNSSSKLMEHKRIH---TGEKPYKCEEC--GKAFSWSSSLTEHKRI-HAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KPYKCEECGKASNSSSKLMEHKRIHTGEKPYKC--EECGKAFSWSSSLTEH-KRIHAGEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --MSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TrEMBLrel. 06, Created)
(TrEMBLrel. 06, Last sequence up
(TrEMBLrel. 25, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (Fragment).
                             35.9%;
                                                     17.8%;
     35;
                             Score 397.5;
Pred. No. 9e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                           D4E06B54DCE0BF9B CRC64;
                                                                                                                                                            Zinc;
        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                               peptidolysis; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY)
                                                                                                                                                               Zinc-finger
                                   9e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T., T
J., E
zinc
                                                        DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
          87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Takeda M.,
Hosaka M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     finger
                                                        Length
          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genes located on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kawamoto
                                                              395;
          51;
          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94
             14;
```

'ny

```
Ś
                              멍
                                                      Ś
                                                                                  밁
                                                                                                       Ωy
                                                                                                                                     В
                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                       Query Match
Best Local S
Matches 115
                                                                                                                                                                                                                                                                                                                                              EMBL; BC03579; AAH35599.1; -...

GO; GO:0005622; C:intracellular; IEA.

GO; GO:0003676; F:nucleic acid binding; IEA.

GO; GO:000355; P:regulation of transcription, DN

InterPro; IPR001909; KRAB.

InterPro; IPR007087; Znf C2H2.

InterPro; IPR007086; Znf C2H2.

InterPro; IPR007086; Znf C2H2.

Pfam; PF01352; KRAB; 1.

Pfam; PF01352; KRAB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CBIANO;
                                                                                                                                                                                                                                       PROSITE; PS50805; KRAB; 1.

PROSITE; PS00028; ZINC FINGER C2H2 1; 11.

PROSITE; PS00028; ZINC FINGER C2H2 2; 12.

PROSITE; PS50157; ZINC FINGER C2H2 2; 12.

SEQUENCE 542 AA; 62756 MW; 395709FE7E094C9B
                                                                                                                                                                                                                                                                                             PRINTS; PRO0048; ZINCFINGER.
PRODOM; PD000003; Znf C2H2; 1.
SMART; SM00349; KRAB; 1.
SMART; SM00355; ZnF_C2H2; 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similar to zinc finger protein 208.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IISSUE=Testis;
    181
                              326
                                                                                                                                     212
                                                                                                           64
                                                                                                                                                                                          115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23
                                                                                                                                                                œ
                                                                                                                                                                                                     Similarity
QTWSVLQFHIKQSHPK----LKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK
                                                                                                  KAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEA
                                        FYKHQSL-RHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNF
                                                                         KAFNRSSHLTTHKIIHTGEKPYRCEECGKAFNRSSHLTTHKRIHTGVKPYKCT--ECGKA
                                                                                                                              KSFCMLLHLTQHKRFHITENSYQC--KDCGKAFNWFSTLTTHRRIHTGEKPYKC--EECG
                                                                                                                                                       KSISSLISSSSSR----PKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCD
                         FNRSSHLTTHRIIHTGEKPYKCEECGKAFNQSSTLTTHKITHAGEKP-YKCEE--CGKAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KCEEC--GKAFNQSSKLTKHKKI-HTGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YKCKECGKAFKHSSTLTKHKIIHTGEKPYKCKECGKAFNQSSKLTEHK-KIHTGEKPYEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (JUL-2002) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCDYCDVGK-FAKKNELVEHYNIFHDGNIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DHPGCFKNFQTWSVLQFHIKQSHPK---LKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KPYKCKKCGKAFNQSAHLTTHEVIHTGEKPYKC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAF-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KPYKC--KECGKAFNRSSTLTTHRKIHTGEKPYKC--EECGKALTQSSHLTTHKIIHTGE 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel. 23, Created)
(TrEMBLrel. 23, Last sequence update)
(TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----YKHQS--LRHHILSVHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQC
                                                                                                                                                                                                   17.6%;
30.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                     39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -KKSHTEEKPYKCEECGKALNRPSTLTIHKIIH--
                                                                                                                                                                                   Pred. No. 2.76
9; Mismatches
                                                                                                                                                                                                 Score 392.5; DB 4
Pred. No. 2.7e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ä
                                                                                                                                                                                                               DB 4;
                                                                                                                                                                                     132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -- EKCGKAFNHFSHLTTHKIIHTGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       databases
                                                                                                                                                                                                                                                                                                                                                                                                                  DNA-dependent;
                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                      Indels
                                                                                                                                                                                                              Length 542;
                                                                                                                                                                                   97;
                                                                                                                                                                                                                                                                                                                                                                                                                  IEA
                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGEKPY
237
                                                  180
                                                                           325
                                                                                                     121
                                                                                                                                                          63
                                                                                                                                267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82
```

```
RESULT 5
Q96N38
ID Q96N3
DD Q96N
AC Q96N
AC Q96N
DT 01-C
DT 01-C
DT 01-C
DT 01-C
DT 101-C
DT 
                                                             片
                                                                                                        Ś
                                                                                                                                                                   밁
             Š
                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 116
                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00048; ZINCFINGER.

ProDoms, PD000003; Znf C2H2; 1.

SMART; SM00349; KRAB; 1.

SMART; SM00355; Znf C2H2; 13.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS508028, ZINC FINGER C2H2 1; 12.

PROSITE; PS50157; ZINC FINGER C2H2 2; 14.

Hypothetical protein; Metal-binding; Nuclear protein; Zinc; Zinc-finger.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tashiro H., Yamazaki M., Watanabe K., Kumagai A., Itakura S., Fukuzumi Y., Fujimori Y., Komiyama M., Sugiyama T., Irie R., Otsuki T., Sato H., Wakamatsu A., Ishii S., Yamamoto J., Isono Y., Kawai-Hio Y., Saito K., Nishikawa T., Kimura K., Yamashita H., Matsuo K., Nakamura Y., Sekine M., Kikuchi H., Kanda K., Wagatsuma M., Murakawa K., Kanehori K., Takahashi-Fujii A., Oshima A., Sugiyama A., Kawakami B., Suzuki Y., Sugano S., Nagahari K., Masuho Y., Nagai K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q96N38;
01-DEC-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation updat
Hypothetical protein FLJ31444.
Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001909; KRAB.
InterPro; IPR007087; Znf C2H2.
InterPro; IPR007086; Znf C2H2 sub
Pfam; PF00096; zf-C2H2; 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GO; GO:0005634; C:nucleus; IEA.
GO; GO:0003676; F:nucleic acid binding;
GO; GO:0006355; P:regulation of transcr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "NEDO human cDNA sequencing project."; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AK056006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SUBCELLULAR LOCATION: NUCLEAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isogai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q96N38
             138
                                                                225
                                                                                                                                                                   169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 468
                                                                                                             81
                                                                                                                                                                                                                21
                                                                                                                                                                                                                                                                   116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          383
                                                                                                                                                                                                                                                                                              Similarity
KTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IKQSHP 195
                                                  GEKPYRCEECGKAFYHSSHLTTHKVIHTGEKPFKC--EECGKAFNHPSALTTHKFIHVKE
                                                                                                                                                                                   RPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHS
                                                                                                     EKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL-RHHILSVHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NRSSTLTKHKITHTGEKSYKWEE 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YRFSYLIKH-KTSHTGEKFYKCEECGKGFNWSSALTKHKRIH---TGEKPYKCEEC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SREYDLRRH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AFNESSNLTTH-KMIHTGEKP---YKCDECGKAFN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDEEDSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -FAKKNELVEHYNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDE
                                                                                                                                                                                                                                                                                                                                                                         555
                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BAB71072.1;
                                                                                                                                                        -EECDKVFKRFSTLTRHKRVHTGEKPFKC--EECGKAFKHSSTLTTHKMIHT
                                                                                                                                                                                                                                                                                                                                                                   64025 MW;
                                                                                                                                                                                                                                                                                      17.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -RSSQLTAH--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----LKWHD
                                                                                                                                                                                                                                                                   45;
                                                                                                                                                                                                                                                                                      Score 392; DB 4
Pred. No. 3e-18;
                                                                                                                                                                                                                                                                                                                                                                   75C246D4820FB920 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            transcription,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ξ
                                                                                                                                                                                                                                                              162;
                                                                                                                                                                                                                                                                                                              4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA-dependent;
                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KMIHTGEKPYKC--EECGKAF
                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                555;
                                                                                                                                                                                                                                                              34:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IEA.
                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -
당
-
                                                     282
                                                                                                        137
                                                                                                                                                        224
                                                                                                                                                                                                           08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  436
                                                                                                                                                                                                                                                              17;
```

```
OR CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CONTROL OF THE CON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         딦
                             Ş
                                                                                        Db
                                                                                                                                         Š
                                                                                                                                                                                                                                                   $
                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF01352; KRAB; 1. —
Pfam; PF00366; zf-C2H2; 13.
PRINTS; PR00046; ZINCFINGER.
SMART; SM00349; KRAB; 1.
SMART; SM00355; ZnF C2H2; 13.
PROSITE; PS50805; KRAB; 1.
PROSITE; PS50805; KRAB; 1.
PROSITE; PS50805; ZNF C2H2; 13.
PROSITE; PS50157; ZNC_FINGER_C2H2_1; 12.
PROSITE; PS50157; ZNC_FINGER_C2H2_2; 14.
Hypothetical protein; Metal-binding; Nuclear pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AL834415; CAD39077.1; -.
GO; GO:0005634; C:nucleus; IEA.
GO; GO:0003676; F:nucleic acid bindi
GO; GO:0006355; P:regulation of trar
InterPro; IPR001909; KRAB.
InterPro; IPR007087; Znf C2H2.
InterPro; IPR007086; Znf C2H2.
InterPro; IPR007086; Znf C2H2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8ND40
Q8ND40;
01-OCT-2002
01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hypothetical DKFZP5470168.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bloecker H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zinc-finger.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ecker H., Boecher M., Brandt P., Mewes H.W., Weil B. mitted (JUL-2002) to the EMBL/GenBank/DDBJ databases SUBCELLULAR LOCATION: NUCLEAR (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GO:0005634; C:nucleus; IEA.
GO:0003676; F:nucleic acid binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            283
                                   196
                                                                                          403
                                                                                                                                                                                                          345
                                                                                                                                                                                                                                                                                                                                                                                                                                116;
                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                           21
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHDGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPDDLLKETEVKKLENLLDQGSKLNNLHELET-EKL-KVEEDEEDEEDSLD----EKRSDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PYKCEECGKAFNVSSHLTTHKMIH---TGEKPYKCEEC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KPYKCEECDKAFNRFSYLTKHKI-IHSGEKSYKCEQ--CGKGFNWSSTLTKHRRIHTGEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GEKPYKCEECGKAFNRSSNLTK--HNIIHTGEKSYKC--EECGKAFNQSSTLTKHRK
KLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHDGN
                                                                                          KPYKCEECDKAFNRFSYLTKHKI-IHSGEKSYKCEQ--CGKGFNWSSTLTKHRRIHTGEK
                                                                                                                                         KTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IKQSHP
                                                                                                                                                                                                          GEKPYRCEECGKAFYHSSHLTTHKVIHTGEKPFKC--EECGKAFNHPSALTTHKFIHVKE
                                                                                                                                                                                                                                                            EKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL-RHHILSVHE
                                                                                                                                                                                                                                                                                                                    RENSYQC--EECDKVFKRFSTLTRHKRVHTGEKPFKC--EECGKAFKHSSTLTTHKMIHT
                                                                                                                                                                                                                                                                                                                                                                         RPKKYICTYEGCDKAYNRPSLLEOHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel. 22, Created)
(TrEMBLrel. 22, Last sequence update)
(TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74012 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              17.6%;
32.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                             45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 392; DB 4;
Pred. No. 3.5e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QSSNLTKHKIIHTGEKLYKCEECGKAFNRSSNLTTHKRIHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A3CBF2437279B863
                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        transcription,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                   162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA-dependent;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 644;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -GKAFNHSSKLTIHKIIHTGE
                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zinc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                         34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  s:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  339
                                                                                                                                                                                                                                                                                                                          344
                                                                                                                                                                                                                                                                                                                                                                                 80
                                            255
                                                                                                459
                                                                                                                                                        195
                                                                                                                                                                                                                402
                                                                                                                                                                                                                                                                     137
                                                                                                                                                                                                                                                                                                                                                                                                                                         17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | Q RESULT | 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                            Ş
                                                                                                   뮍
                                                                                                                                                  8
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
```

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF01352; KRAB; 1.
Pfam; PF00096; zf-C2H2; 13.
PRINTS; PR00048; ZINCFINGER.
PRODOm; PD000003; Znf C2H2; 11.
SMART; SM00349; KRAB; 1.
SMART; SM00355; ZnF C2H2; 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2003 (TrEMBIrel. 24, Created)
01-JUN-2003 (TrEMBIrel. 24, Last sequence update)
01-OCT-2003 (TrEMBIrel. 25, Last annotation update)
Similar to zinc finger protein 91 (HPF7, HTF10) (FF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (APR-2003) to the EMBL/GenBank/DDBJ emBL, BC050468; AAH50468.1; -.
GO; GO:0005622; C:intracellular; IEA.
GO; GO:0003676; F:nucleic acid binding; IEA.
GO; GO:0003675; P:regulation of transcription,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q86W65;
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q86W65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR001909;
InterPro; IPR007087;
InterPro; IPR007086;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                    hes 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              311
                                                                                                                           450
                                                                                                                                                               196
                                                                                                                                                                                                 393
                                                                                                                                                                                                                                     138
                                                                                                                                                                                                                                                                                                                                               279
                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PYKCEECGKAFNVSSHLTTHKMIH---TGEKPYKCEEC--GKAFNHSSKLTIHKIIHTGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPDDLLKETEVKKLENLLDQGSKLNNLHELET-EKL-KVEEDEEDEEDSLD---EKRSDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GEKPYKCEECGKAFNRSSNLTK--HNITHTGEKSYKC--EECGKAFNQSSTLTKHRK
                                                                                                                                                                                                                                                                                                      EKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSL-RHHILSVHE
                 RSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRHLK
                                                                                                                                                           KLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHDGN
                                                                                                                                                                                               KPYKCEECDKAFNRFSYLTKHKI-IHSGEKSYKCEQ--CGKGFNWSSTLTKHRRIHTGEK
                                                                                                                                                                                                                                                                         GEKPYRCEECGKAFYHSSHLTTHKVIHTGEKPFKC--EECGKAFNHPSALTTHKFIHVKE
                                                                                                                                                                                                                                                                                                                                               RENSYQC-
                                                                                                                                                                                                                                                                                                                                                                                 RPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHS
                                                     KP---YKCEECGKAFN-
                                                                                   IPDDLLKETEVKKLENLLDÇGSKLNNLHELET-EKL-KVEEDEEDEEDSLD---EKRSDV
                                                                                                                           PYKCEECGKAFNVSSHLTTHKMIH---TGEKPYKCEEC
                                                                                                                                                                                                                                   KTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IKQSHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            665 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                               -EECDKVFKRFSTLTRHKRVHIGEKPFKC--EECGKAFKHSSTLTTHKMIHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              76467 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                       17.6%;
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KRAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Znf_C2H2_sub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C2H2.
                                                                                                                                                                                                                                                                                                                                                                                                                       45;
                                                       --QSSNLTKHKIIHTGEKLYKCEECGKAFNRSSNLTTHKRIHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QSSNLTKHKI IHTGEKLYKCEECGKAFNRSSNLTTHKRIHT
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 392; DB 4;
Pred. No. 3.7e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; l
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1ABDA1E4E00249DF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Æ
                                                                                                                                                                                                                                                                                                                                                                                                                         162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA-dependent;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 665;
                                                                                                                                 GKAFNHSSKLTIHKIIHTGE
                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                       34
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            514
                                                                                                                                                                                                                                                                                                                                                     334
                                                                                                                                                                                                         449
                                                                                                                                                                                                                                           195
                                                                                                                                                                                                                                                                               392
                                                                                                                                                                                                                                                                                                                 137
                                                                                                                                                                                                                                                                                                                                                                                       90
                                                                                                                                 504
                                                                                                                                                                     255
```

٠,

멍

559

GEKPYKCEECGKAFNRSSNLTK--HNIIHTGEKSYKC--EECGKAFNQSSTLTKHRK 611

```
밁
                                       Ş
                                                                        뮍
                                                                                                    S
                                                                                                                                      뮍
                                                                                                                                                                       Ş
                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A Ninomiya K., Magatsuma M., Kinda K., Kondo H., Yokoi T., Kodaira H.

A Riviva T., Takahashi M., Kikkawa E., Omura Y., Abe K., Kamihara K.,

A Katsuta N., Sato K., Tanikawa M., Yamazaki M., Sugiyama T., Irie R.,

A Katsuta N., Sato H., Wakamatsu A., Ishii S., Yamamoto J., Isono Y.,

A Kawai-Hio Y., Saito K., Nishikawa T., Kimura K., Yamasahita H.,

A Matsuo K., Nakamura Y., Sekine M., Kikuchi H., Murakawa K.,

A Matsuo K., Nakamura Y., Sekine M., Kikuchi H., Murakawa K.,

A Matsuo K., Nakamura Y., Sekine M., Kikuchi H., Murakawa K.,

Ra Kanehori K., Takahashi-Fujii A., Oshima A., Sugiyama A., Kawakami I.

Ra Wuzuki Y., Sugano S., Nagahari K., Masuho Y., Nagai K., Isogai T.,

RI "NEDO human cDNA sequencing project.",

Submitted (JUL-2002) to the EMEL/GenBank/DDBJ databases.

CC -!- SUBCELLULAR LOCATION: NUCLEAR (BY SIMILARITY).

DR EMBL, AKO96342; BAC04764.1; -.

DR GO; GO:0005237; F:metallopeptidase activity; IEA.

GO; GO:0005237; F:metallopeptidase activity; IEA.

GO; GO:0005237; F:metallopeptidase activity; IEA.

GO; GO:000527; F:micleic acid binding; IEA.

DR GO; GO:000527; F:ric ion binding; IEA.

GO; GO:000525; P:regulation of transcription, DNA-dependent; IEA.

DR GO; GO:0006255; F:regulation of transcription, DNA-dependent; IEA.

DR GO; GO:000525; Pept M Zn BS.

InterPro; IPR007086; Znf C2H2 Sub.

DR InterPro; IPR007086; Znf C2H2 Sub.
                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 120
                                                                                                                                                                                                                                                                                                                                             PROSITE; PS50005; KRAB; 1.

PROSITE; PS00028; ZINC FINGER C2H2_1; 15.

PROSITE; PS50157; ZINC FINGER C2H2_2; 16.

PROSITE; PS00142; ZINC PROTEASE; 4.

Hypothetical protein; Metal-binding; Nuclear protein; Zinc; Zinc-finger.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00048; ZINCFINGER.
ProDom; PD000003; Znf_C2H2; 5.
SMART; SM00349; KRAB; 1.
SMART; SM00355; Znf_C2H2; 16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hypotnetical protein FLJ39023.
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-0CT-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-0CT-2003 (TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-2002
01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8N8Q4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q8N8Q4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  æ
          372
                                                                      313
                                                                                                                                                                                                            199
                                                                                                                                                                                                                                                                        120;
                                                                                                                                                                         83
                                                                                                                                                                                                                                         23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PF00096; zf-C2H2; 15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PF01352; KRAB;
                                                                                                                                                                                                                                                                                         Similarity
   EE--CGKAFIWSSVLTRHKRVHTGEKPYKCEECGKAFVASSTLSKHEIIH--
                                                                                                                                                                                                                                KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                DHPGCFKNFQTWSVLQFH--IKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWT 229
                                                               YVCEECGKAFKYSRILTTHKRIHTEEKPYKCNKCGKAFIASSTLSRHEFIHM-GKKHYKC
                                                                                                                                     KPYKCEECGKAFNQSSTLTKHKKIHTGEKPYKC-
                                                                                                                                                                  KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLRHH------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FROM N.A.
                                                                                                                                                                                                                                                                                                                                        592 AA; 67920 MW;
                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                   EECGKAFKYSSALNTHKRIHTGEKPYKC--DKCDKAFIASSTLSKHEIIHTGK
                                                                                                                                                                                                                                                                                         17.5%;
31.1%;
                                                                                                      ILSVH----
                                                                                                                                                                                                                                                                      41;
                                                                                                                                                                                                                                                                                    Score 391; DB 4;
Pred. No. 3.8e-18;
                                                                                                                                                                                                                                                                                                                                      D116FB9366EB4BDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                      Mismatches
                                                                                                EKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hominidae;
                                                                                                                                                                                                                                                                     161;
                                                                                                                                 EECGKAFNQSSTLTKHKKIHTGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sugiyama T., Irie R., mamoto J., Isono Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yokoi T., Kodaira H.
Abe K., Kamihara K.,
                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kodaira H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kawakami B.,
                                                                                                                                                                                                                                                                   64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IEA
                                                                                                                                                                                                                                                                   Gaps
                                                               371
                                                                                                171
                                                                                                                                 312
                                                                                                                                                                  131
                                                                                                                                                                                                   254
                                                            Š
Ś
                                뮍
                                                                                               В
                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
```

```
RESULT 9
Q8N211
ID Q8N2
AC Q8N2
DT 01-C
DT 01-C
DT 01-C
DT 01-C
C C Euka
OC Mamm
OX NCEN
RA OShil
RA OShil
RA OShil
RA Isox
RA OShil
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
RA Isox
R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                               Matches 107;
                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR00190; KRAB.

InterPro; IPR00190; KRAB.

InterPro; IPR007087; Znf C2H2.

InterPro; IPR007087; Znf C2H2.

InterPro; IPR007086; Znf C2H2.

Pfam; PF00352; KRAB; 1.

Pfam; PF00096; zf-C2H2; 12.

PFRINTS; PR00048; ZINCFINGER.

ProDom; PD000003; Znf C2H2; 1.

SWART; SW00349; KRAB; 1.

SWART; SW00349; KRAB; 1.

SWART; SW00355; ZnF C2H2; 12.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS00028; ZINC FINGER C2H2 1; 11.

PROSITE; PS00028; ZINC FINGER C2H2 2; 13.

PROSITE; PS00028; ZINC FINGER C2H2 1; 11.

PROSITE; PS00157; ZINC FINGER C2H2 1; 11.

PROSITE; PS00157; ZINC FINGER C2H2 1; 12.

PROSITE; PS00157; ZINC FINGER C2H2 1; 13.

PROSITE; PS00158; ZINC FINGER C2H2 1; 13.

PROSITE; PS00157; ZINC FINGER C2H2 1; 13.

PROSITE; PS00158; ZINC FINGER C2H2 1; 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oshima A., Takahashi-Fujii A., Tanase T., Imose N., Takeuchi Arita M., Musashino K., Yuuki H., Hara H., Sugiyama T., Irie Otsuki T., Sato H., Ota T., Wakamatsu A., Ishii S., Yamamoto Isono Y., Kawai-Hio Y., Saito K., Nishikawa T., Kimura K., Yamashita H., Matsuo K., Nakamura Y., Sekine M., Kikuchi H., Wagatsuma M., Murakawa K., Kanehori K., Sugiyama A., Kawakami Suzuki Y., Sugano S., Nagahari K., Masuho Y., Nagai K., Isoga "NEDO human cDNA sequencing project.";
Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GO; GO:0005634; C:nucleus; IEA.
GO; GO:0003676; F:nucleic acid b
GO; GO:0006355; P:regulation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; F42075; F42075.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Thymus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hypothetical protein FLJ36350.
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-OCT-2002
01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q8N211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q8N211;
                                            142
                                                                                                     254
                                                                                                                                                                                                                          198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        478
                                                                                                                                                           83
                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AK093669; BAC04216.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             230
                                                                                                                                                                                                                                                                                                                                                                               Similarity
CKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IKQSHPKLKC
                                                                                                                              KPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQEAFYKHQSL-RHHILSVHEKTLT
                                                                                                                                                                                                                                                KKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                     KPYKCEECGKAFNOFSNLTTHKKIHTGEQPYICEECGKAFTQSSTLTTHKRIHTGEKPYK 313
                                                                                                                                                                                                                 KLYKC--QECDRTFNQFSNLTEYKKDYAREKPYKC--EECGKAFNQSSHLTTHKIIHTGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KINCPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PYRC--RECGKAFNHSATLSSHKKIH 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -EKLKVEEDEEDES----LDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDYCDVGK-FAKKNELVEHYNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELET-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EKPYKCEECGKAFNQSSTLIKHKKIHTREKPYKCEECGKAF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CEEC--GKAFNOSSSITKHKKI-HTGEKP---YKCEECGKAFN--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540 AA;
                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel. 22, Created)
(TrEMBLrel. 22, Last sequence up
(TrEMBLrel. 25, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62985 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Primates;
                                                                                                                                                                                                                                                                                                                                                                         17.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
                                                                                                                                                                                                                                                                                                                                         61;
                                                                                                                                                                                                                                                                                                                                                                         Score 390;
Pred. No. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Ve
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84D7D2EC15A7002C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         binding;
                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      transcription,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                         4e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae;
                                                                                                                                                                                                                                                                                                                                         155;
                                                                                                                                                                                                                                                                                                                                                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA-dependent;
                                                                                                                                                                                                                                                                                                                                                                                                  Length 540;
                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -HLSTHLTTHKILHTGEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QSSSLTKHKKIHTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kanda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G 70 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 m
                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>~</u>
                                  199
                                                                                                                                                    141
                                                                                                                                                                                                                 253
                                                                                                                                                                                                                                                                             82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       477
```

```
RESULT
Q96N22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALD DATE OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
밁
                                                  γ
                                                                                                                     片
                                                                                                                                                                          8
                                                                                                                                                                                                                                             당
                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q96N22;
01-DEC-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nilomiya K., Wagatsuma M., Kanda K., Kondo H., Yokoi T., Kodair Furuya T., Takahashi M., Kikkawa E., Omura Y., Abe K., Kamihara Katsuta N., Sato K., Tanikawa M., Yamazaki M., Sugiyama T., Iri Otsuki T., Sato H., Wakamatsu A., Ishii S., Yamamoto J., Isono Kawai-Hio Y., Saito K., Nishikawa T., Kimura K., Yamashita H., Matsuo K., Nakamura Y., Sekine M., Kikuchi H., Murakawa K., Kanehori K., Takahashi-Fujii A., Oshima A., Sugiyama A., Kawaka Suzuki Y., Sugano S., Nagahari K., Masuho Y., Nagai K., Isogai NEDO human CDNA sequencing project."

"NEDO human CDNA sequencing project."

"NEDO human CDNA sequencing project."

"NEDO human CDNA sequencing project."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PRO0048; ZHCFINGER.

ProDom; PD000003; Znf_C2H2; 2.

SMART; SM00355; Znr_C2H2; 16.

PROSITE; PS00028; ZINC_FINGER_C2H2_1; 10.

PROSITE; PS50157; ZINC_FINGER_C2H2_2; 16.

PROSITE; PS50157; ZINC_FINGER_C2H2_2; 16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Euthería;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q96N22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- SUBCELLULAR LOCATION: NUCLEAR EMBL; AK056088; BAB71090.1; -. GO; GO:0005634; C:nucleus; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zinc-finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR007087; Znf_C2H2.
InterPro; IPR007086; Znf_C2H2_sub
Pfam; PF00096; zf-C2H2; 15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314 CEECGKAFNRSSKLTEHKNIHTGEQP-YKCEE--CGKAFNRSSNLTEHRKIHTEEKPYKC
                                                                                                                        333
                                                                                                                                                                                                                                                275
                                                                                                                                                                                                                                                                                                                                                                        217
                                                            180
                                                                                                                                                                                                                                                                                                            63
                                                                                                                                                                                                                                                                                                                                                                                                                              w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PYKCEECGKAFSRS---SKLTEHKIIHTGEKPYKCER--CDKAFNQSANLTKHKKIH 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMSAQRSIKSFTASLEGSKSVSKLISNSGKK-INCPKNNCDRMFSREYDLRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---KPYKCEECGKAFIQSSKLTEHKKIHSGEIPYKCEECGKAFKHSSSLTTHKRIHTGEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDE-----EDEEDSLDEKRSDVRSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KECGKAFKHSSALTTHKRIH---TGEKPYKCEEC--GKAFNRSSKLTEHKKL-HTGK---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNIFHDGNIPD
                                                                                                                                                                                                                                                                                                            DKAFFRKSHLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQE
                                                                                                                                                                                                                                                GKAFNQSSHLTRHKIIHTGEKPYKCEECGKAFRQSSHLTTHKIIHTGEKPYKC--EECGK
   FNQFSNLTTHKRIHTGEKPYKCEECGKAFNQSSILTTHKRIH---TGEKSYKCEEC--GK
                                                        FQTWSVLQFH--IKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK
                                                                                                                        AFNKSSHLTRHKSIHTGEKPYQCEKCGKASNQSSNLTEHKNIHTEEKP-YKCEE--CGKA
                                                                                                                                                                                 AFYKHOSL-RHHILSVHEKTLTCKOCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKN
                                                                                                                                                                                                                                                                                                                                                                     ECDKAFNOSSTLTTHKIIHTREKLNEYKECGKAFNOSSHLTRHKIIHTGEKPYKC--EEC
                                                                                                                                                                                                                                                                                                                                                                                                                                 ESDETKSISSLISSSSSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   576 AA; 66620 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel. 19, Created)
(TrEMBLrel. 19, Last sequence update)
(TrEMBLrel. 24, Last annotation update)
protein FLJ31526.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 390; DB
Pred. No. 4.3e
57; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4396672D34BF99CD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.3e-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yokoi T., Kodaira H.
Abe K., Kamihara K.,
Sugiyama T., Irie R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 576;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kawakami B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               æ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              370
                                                                                                                                 389
                                                                                                                                                                                             179
                                                                                                                                                                                                                                                      332
                                                                     237
                                                                                                                                                                                                                                                                                                                                                                               274
                                                                                                                                                                                                                                                                                                                                                                                                                                        82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17
```

```
OR RESULTION OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF STREET OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                             RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., RA Adams M.D., Celniker S.E., Holt R.A., F.W., Hoskins R.A., Galle R.F., RA Adams M.D., Celniker S.E., Holt R.A., Sabburner M., Henderson S.N., RA George R.A., Lewis S.E., Richards S., Asbburner M., Henderson S.N., RA George R.A., Lewis S.E., Richards S., Asbburner M., Henderson S.N., RA Button G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., RA Burtis R.G., Rogers Y.-H.C., Blazel R.G., Champe M., Pfeiffer B.D., RA Burtis R.M., Royle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G., RA Abril J.F., Agbayani A., An H.-J., Andrews-Frannkoch C., Baldwin D., Ra Burtis K.C., Blasu A., Baxendale J., Bayzaktaroglu L., Beasley E.M., RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S., RA Beeson K.Y., Busam D.A., Butler H., Cadieu E., Center A., Chandra I., RA Gebry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P., RA Gebris S., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M., RA Gebris S., Delcher A., Domes M., Dugan-Rocha S., Dunkov B.C., Dunn P., RA Golden K., Doug F., Gornell J.H., Gu Z., Gelbart W.M., Glasser K., RA Glodek A., Gong F., Gornell J.H., Gu Z., Gelbart W.M., Glasser K., RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J., A Harris M., Harvey D., Heiman T.J., Hernandez J.R., Houck J., A Harris M., Kallah F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A., Bakimel B.B., Kodira C.D., Kraft C., Kravitz S., Kullp D., Lai Z., Liang Y., Lini X., Mackulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., RA Mchulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., RA Markulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., RA Markulov G., Wilshina N.V., Mobarry C., Scheeler F., Shen H., RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T., RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Shich T., Ra Shen B., Wallon K.A., Nixon K., Nusskern D.R., Wang S., Yao Q.A., Mang S., Yao Q.A., Mang S., Yao Q.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9VG72;
01-MAY-2000
01-MAY-2000
01-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=Berkeley;
MEDLINE=20196006; PubMed=10731132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CG5245 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9VG72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ephydroidea; Drosophilidae; Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila
                              EMBL; AE003696; AAF54813.1;
HSSP; P08047; 1SP2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - FAKKNELVEHYNI FHDGNI PDDLLKETEVKKLENLLDQGSKLINNLHELETEKLKVEEDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EDEEDSLDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AFYRSSKLTEHKKI-HTGEKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NQSSNLTGHKKIH--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SREYDLRRHLKWHDDNLQRIESFLNSIEKEETPEGEPLVKKARMDLLPNETSVISR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KPYQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13,
13,
24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Fruit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -CEECGKAFNQSSHLTR--HKRIHTGEKPYQCEK--CGKAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -YTCEECGKAFNHSSHLATHKV-IHTGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -TGEKLYKPKRCNSDFENTSKFSK
                                                                                                                                                                                                         H.O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                K.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       490
```

```
RESULT

QUELTI

QUELTI

QUELTI

QUELTI

AC QUE

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SQ SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 109
             GO; G:0005522; C:intracellular; IEA.
GO; GO:0005526; F:nucleic acid binding; IEA.
GO; GO:0006355; P:regulation of transcription, DN
InterPro; IPR001909; KRAB.
InterPro; IPR007087; Znf C2H2.
InterPro; IPR007086; Znf C2H2.
InterPro; IPR007086; Znf C2H2 sub.
Pfam; PF01352; KRAB; I.
Pfam; PF01352; KRAB; I.
PRINTS; PR00048; ZINCTINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR007087; Znf C2H2.
Pfam; PF00096; zf-C2H2; 15.
ProDom; PD000003; Znf C2H2; 3.
SMART; SM00355; ZnF C2H2; 15.
PROSITE; PS00028; ZINC FINGER C2H2 1; 1:
PROSITE; PS50157; ZINC-FINGER_C2H2 2; 1:
Metal-binding; Zinc; Zinc-finger.
SEQUENCE 501 AA; 58790 MW; BBAE04740
                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

MEDLINE-21864204; PubMed-11751921;
Shin J.N., Kim I., Lee J.S., Koh G.Y., Lee Z.H., Kim H.H.;
Shin J.N., Kim T., Lee J.S., Koh G.Y., Lee Z.H., Kim H.H.;
PA Novel Zinc Finger Protein That Inhibits Osteoclastogenesis
Function of Tumor Necrosis Factor Receptor-associated Factor 6
J. Biol. Chem. 277:8346-333(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8TD23
Q8TD23;
                                                                                                                                                                                                                                                EMBL; AY044432; AAK95822.1; PIR; F42075; F42075.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2003 (TrEMBLrel. 25, Last sequence update)
TRAF6-binding zinc finger protein.
Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QEHLRTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LKCSQCSATFAMRSLYRVHVRLH---TRERQYKCAECS-KSFFKKSHLVEHQQV-HTGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RPHK--CSH--CSKTFTQNSSLKQHLHEHTGERFFKCT--QCSTSFARKSHLQVHLRTHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGK-KINCPKNNCDRMFSREYDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIFHDGNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TLTCKQCNKVFTRESKLAQHKLKHHGGSEAYQCDHPGCFKNFQTWSVLQFHIKQSHPK--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PFKCTHCFKDFKCRTHLR--VHMLDHIGEKVPKCSYCSKEFKLSSQLLVHLQEHTGKNQF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P-----KLKVEEDEEDEEDSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SFKCTQCPKTFLQNDSLQIH-LRVHAGEDPFKCPH--CSETFARNSRLQLHLLEHAGKEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EKKPFHCSVCGKGVNSRQHLKRHEITH--TKSFKCTFENCQEAFYKHQSLRHHILSVHEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RPKKYICTYEGCDKAYNRESLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EERPFECTHCEKAFKNNSHLQEHLRTHQEARPFKCS--HCSKSFKLRSILQKHLLTHAER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 369
Znf_C2H2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17.4%;
29.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 388.5; DB 5;
Pred. No. 4.6e-18;
3; Mismatches 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BBAE04740D41C43F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STLHMHLRTHTGELPFKC--SHCSKLFARSAEH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
15
                                                                                                                                                                    DNA-dependent;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          53;
                                                                                                                                                                                                                                                                                                                           6. ";
                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                      IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80
```

```
ACOX
                                                                                                                                                                                                                                                                                                                                                         RESULT
Q80VH2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                        뭉
                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                      뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SQ DR DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Sim
Matches 105;
                   InterPro; IPR001909; KRAB.
InterPro; IPR007087; Znf_C2H2.
Pfam; PF001352; KRAB; 1.
Pfam; PF00096; Zf-C2H2; 15.
SMART; SM00349; KRAB; 1.
SMART; SM00355; Znf_C2H2; 15.
PROSITE; PS50805; KRAB; 1.
PROSITE; PS00028; ZNC_FINGER_C;
PROSITE; PS50157; ZNC_FINGER_C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART; SM00349; KRAB; 1.

SMART; SM00355; ZNF C2H2; 13.

PROSITE; PS50805; KRAB; 1.

PROSITE; PS50805; ZINC_FINGER_C2H2_1; 9

PROSITE; PS50157; ZINC_FINGER_C2H2_2; 1/

Metal-binding; Zinc; Zinc-finger.

SEQUENCE 568 AA; 66222 MW; 3BBC8198:
                                                                                                                            60; GG
60; GG
EMBL;
           SEQUENCE
                                                                                                                                                                  Submitted (MAR-2003) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN=FVB/N; TISSUE=Breast tumor;
                                                                                                                                                                                                                                                                               Similar to zinc finger protein 97.
                                                                                                                                                                                                                                                                                                                     Q80VH2;
01-JUN-2003
                                                                                                                                                                                                                                 NCBI_TaxID=10090;
                                                                                                                                                                                                                                               Mammalia;
                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                               01-OCT-2003
                                                                                                                                                                                                                                                                                                                                              Q80VH2
                                                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                       GO:0006355; P:regulation of transcription,
                                                                                                                                     L; BC049144; AAH49144.1; -.. GO:0005622; C:intracellular; IEA. GO:0003676; F:nucleic acid binding;
                                                                                                                                                                                                                                                                                                                                                                                                       551
                                                                                                                                                                                                                                                                                                                                                                                                                              362
                                                                                                                                                                                                                                                                                                                                                                                                                                                      496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15
700355; 4....
PS50805; KRAB; 1.
PS00028; ZINC FINGER C2H2 1;
PS50157; ZINC FINGER C2H2 2;
PS50157; ZINC FINGER C2H2 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKK-INCPKNNCDRMFSREYD
                                                                                                                                                                                                                                                                                                                                                                                                       LTKHKKIH
                                                                                                                                                                                                                                                                                                                                                                                                                               LRRHLKWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTHKRIHTGEKPYKCEECSKAFSRS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HKRIHTGEKPYKCEECGKAFNRSSKLTEHKNIHTGEOP-YKCEE--CGKAFNRSSNLTEH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HLETHIVSHSEKKPFHCSVCGKGVNSRQHLKRHEITHTKSFKCTFENCQEAFYKHQSL-R
                                                                                                                                                                                                                                               Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RKIHTEEKPYKCKECGKAFKHSSALTTHKRIH---TGEKPYKCEEC--GKAFNRSSKLTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --IKQSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HHILSVHEKTIJTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SSKLTKHKRIYTCEKLYKCQECDRTFNQFSNLTEYKKDYAREKPYKC--EECGKAFNQSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SSSSSSRPKKYIC----TYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YKKLHTGK----
                                                                                                                                                                                                                                                                                          (TrEMBLrel. 24, Created)
(TrEMBLrel. 24, Last sequence up)
(TrEMBLrel. 25, Last annotation
                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       558
                                                                                                                                                                                                                                                                                                                                                                                                                              369
                                                                                                                                                                                                                                              Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17.4%;
28.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KPYKCEECGKAFIQSSKLTEHKKIHSGEIPYKCEECGKAFKHSSSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 388; DB 4; 1
Pred. No. 5.7e-18;
2; Mismatches 167;
                                                                                                                                                                                                                                            Craniata; Vert
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                           PRT;
        F456D3FB56E86C39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3BBC819822B89940 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 -SKLTEHKI IHTGEKPYECER--CDKAFNQSAN
                                                                                                                                                                                                                                                                                                                                           559
                                                                                                                                      IEA.
                                                                                                                                                                                                                                                        Vertebrata;
                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                             Muridae;
                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                         databases
                                                                                                                        DNA-dependent;
        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                            Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 568;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34;
                                                                                                                         IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDEEDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  129
                                                                                                                                                                                                                                                                                                                                                                                                                                                 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70
```

DB 11;

```
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESULT
QRESUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
Ş
                                                    멍
                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match

Best Local Similarity

Matches 109; Conserv
                                                                                                                                                                                  Query Match
Best Local (
                                                                                                                                                               Matches
                                                                                                                                                                                                                                                            60,770 full-length cDNAs.";

Nature 420:563-573 (2002).

EMBL; AK032220; BAC27766-1; -.

InterPro; IPR007087; Znf_C2H2.

InterPro; IPR007086; Znf_C2H2.

Pfam; PP00096; Zf-C2H2; B

PRINTS; PR00048; ZINCFINGER.

SMART; SM00355; ZnF_C2H2; 8.

PROSITE; PS00028; ZINC_FINGER_C2H2_1; 8.

PROSITE; PS00028; ZINC_FINGER_C2H2_2; 8.

SEQUENCE 297 AA; 34666 MW; 2894CC27C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8BJ46;
Q8BJ46;
01-MAR-2003
01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Olfactory brain;
MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MSZF33 homolog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the RIKEN Genome Exploration Research Group "Analysis of the mouse transcriptome based o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     231 DYCDVGKFAKKNELVEHYNIFHDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKL
     83
                                                      69
                                                                                                        23
                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KKYICTYEGCDKAYNRESLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CNQCDKAFSQHSTLQNHRRTHTGEKPFKCNQCDKAFSRHSTLQTHRRTHTGEKP-FKCNQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NECDKAFSQHSTLQTHRRTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NNCDRMFSREYDLRRHLKWH 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PFKCNQCDK-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KVEEDEEDELDEKRSDVRSDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKI-NCPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NOCD--KTFSNHSTLQTHRRTHTGE-----KPYKCNQCDKAFSRHSTLQTHRRTHTGEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PGCFKNFQTWSVLQFHIKQSH----PKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---CQEAFYKHQSLRHHILS-VHEKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KPYKCNQCDKAFSQYSHLHIHRRTHTGEKPLKCNECDETFSNHSNLQTHRRIHTGEKPYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKC----TFEN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KPYKCNQ--CDKAFSQHSTLQTHRRTHTGEKPYKC--DQCDKAFSEKCSLQTHRRTHTGE 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --CDKAFSQYSHLHIH-RRTHTGEKPFKCNQCNKAFSQYSHLHIHRRTH---TGEKPYKC
  KPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLRHHILSVHEKTL
                                                 KRYKCNQ--CDKAYSRHSILQIHKRTHSGEKPYEC--NQCGKAFTQHSHLKIHMVTHTGE
                                                                                     KKYICTYEGCDKAYMRPSLLEQHLRIHSNDRPYKCTVDDCDKAFFRKSHLETHIVSHSEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel. 23, Created)
(TrEMBLrel. 23, Last sequence up)
(TrEMBLrel. 25, Last annotation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17.4%;
                                                                                                                                                            17.3%; Score 385.5; DB 1 38.1%; Pred. No. 4.2e-18; bive 36; Mismatches 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---AFSQKCSLQKHIRIHT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 387; DB
Pred. No. 6.6e
55; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           519
                                                                                                                                                                                                                                                                       2B94CC27CB2635EB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          297
                                                                                                                                                                                                                                                                                                   ထထ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6.6e-18
                                                                                                                                                                                                                   DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                p Phase I & II
on functional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                               82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 559;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                  Indels
                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Team;
                                                                                                                                                                                                                      297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; 08
                                                                                                                                                               33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -GEKLYKC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     o
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 415
          140
                                                               124
                                                                                                                82
```

```
RASULT 15
Q8VEC ID Q8VEC
AC Q8VEC
AC Q8VEC
DT 01-MA
DT 01-JU
DE Simil
OS Mus T
OC Bukar
OC Mamma
OC MAmma
OC MAMMA
DT IN [1]
RN SEQUE
RA SEQUE
RA SEQUE
DR PFAM;
DR SMARR
DR PROSI
DR PROSI
DR PROSI
DR PROSI
DR PROSI
DR PROSI
DR PROSI
DR SEQUE
RN Metal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                               당
                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                     Search completed: July 22,
                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; BC019219; AAH19219.1; -.

InterPro; IPR007087; Znf C2H2.

Pfam; PPR00096; Zf-C2H2; I2.

SMARR; SM00355; ZnF C2H2; I1.

SMO0355; ZnF C2H2; I1.

PROSITE; PS00028; ZINC_FINGER_C2H2_1; I1.

PROSITE; PS50157; ZINC_FINGER_C2H2_2; I1.

Metal-binding; Zinc; Zinc-finger.

SEQUENCE 511 AA; 59582 MW; I1C75B5E3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONUBC1:

ONU
time : 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (DEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8VEC1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        138
                                                                                                                                                                                                                                                                                                                                                     308
                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110;
                                                                                                                                                                                                                                                                                           252
                                                                                                                396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PKLK---CPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGK-FAKKNELVEHYNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T-----CKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFHIKQSH 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H--EKTLTCKQCNKVFTRPSKLAQHKLKHHGGSPAYQCDHPGCFKNFQTWSVLQFH--IK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGEKPYECEQCGKAFANQSYFQVHKRIH--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SHSEKKPFHCSVCGKGVNSRQHLKRHEITHT--KSFKCTFENCQEAFYKHQSLRHHILSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SSSRPKKYICTYEGCDKAYNRPSLLEQHLRTHSNDRPYKCTVDDCDKAFFRKSHLETHIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FHDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGEKPYKCNECGKAFARHSHLKVHKITHTGEKP-YKCNQ--CGKALAYHSTLQVH-QRTH
                                                                                                                                                                                                                                                                                                                                               MGEKPYKCSECDKGFTQKCRLIIHQIIHTGKKGYKCSECDKC----FILKSDLSIHQRI-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VHTGEKPYKCSECDKGFTSKSRLNIHQRVHTGEKSYKCS--ECDKSFSQQGNLSIH-LRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -HTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HTGEKPYKCSECDKCFTYKSGLRSHQI-IHTGEKAYKCSE--CGKCFTHKGDLRRHQSIH
                                                                                                                                                                       SDSMSAQRSIKSFTASLEGSKSVSKLISNSGKKINCPKNNCDRMFSREYDLRRH
                                                                                                                                                                                                                                                                                           HDGNIPDDLLKETEVKKLENLLDQGSKLNNLHELETEKLKVEEDEEDEEDSLDEKRSDVR
                                                                                                                                                                                                                                                                                                                                                                                                         QSHPKLKCPKCGKGCVGKKGLSSHMLSHDDSTMIKIWTCDYCDVGKFAKKNELVEHYNIF
                                                                                                             --SYKCSECDKSFTQ--QGNLRIHLRIHTGEKPYKC--SECDKCFTYKSGLRSH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (DEC-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    254
                                                                                                                                                                                                                                    KPYECSECGKGFTSKSRL-NIHQ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17.1%;
                           2004, 16:47:24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 382; DB 11;
Pred. No. 1.3e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11C75B5E38F2DB6F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 511;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -GKAFVGSSDLKRHERV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        233
                                                                                                                                                                                                                                                                                                        311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               307
                                                                                                                                                                                                                                                 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17;
```